

„The situation is changing the habits“ –
Dietary acculturation and affecting factors among
selected South Indian migrants in Singapore
in context of the acculturation process

Sandra Pahr-Hosbach



INAUGURAL-DISSERTATION

zur Erlangung des Doktorgrades (Dr. oec. troph.)
im Fachbereich Agrarwissenschaften, Ökotrophologie und Umweltmanagement,
Institut für Ernährungswissenschaft der Justus-Liebig-Universität Gießen



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ABBREVIATIONS

EAAM	East Asian Acculturation Measure
IP	Interview Partner
GDP	Gross Domestic Products
HDB	Housing & Development Board
NIF	Non-Indian Food
SGP	Singapore
UN	United Nations
US	United States
US\$	United states Dollar

GLOSSARY

(in alphabetical order)

The Glossary was established to clarify definitions of terms used in this research. Sources are quoted when existing while some definitions are introduced for this study.

Asian Indian/Indian: The sample is distinguished as Indian and not Asian Indian. The United States Census Bureau uses the term Asian Indian to avoid confusion with the indigenous people of America commonly referred to as American Indians. Hence, the term “Asian Indian” is mostly used within studies conducted in the United States dealing with migrants from India. However, it is likely although not fully certain that the predominant number of Indian migrants living in Singapore are born in India (there is no data available on native American-Indians living in Singapore). Therefore, the term Indian refers to Asians of Indian origin and is used in this study.

Cultural Identity: Culture refers to “(...) *the unique behaviour and lifestyle shared by a group of people and includes customs, habits, beliefs and values that shape emotions, behaviour and life pattern.*” (TSENG 2003:1) BHATIA AND RAM (2001) defined cultural identity is the interface between the person and the cultural context. This definition is supported by JENSEN (2003:190) who described cultural identity as “(...) *a broad range of beliefs and behaviours that one shares with members of one’s community.*” Cultural identity is part of an individual’s history as well as their future. It is “(...) *a matter of 'becoming' as well as of 'being' and undergoes constant transformation.*” (HALL 1990:225)

Eating behaviour: “*Ernährungsverhalten ist eine Handlung, die willentlich oder gewohnheitsmäßig abläuft. Sie umfasst die Nahrungsbeschaffung, Zubereitung, den Verzehr und die Nachbereitung von Lebensmitteln durch ein Individuum und/oder von sozialen Gruppen. Sie kann auch religiös-symbolischen Zwecken dienen und von diesen beeinflusst werden. Das (...) Ernährungsverhalten eines Individuums ist immer eine Folge endogener und exogener Ursachen (...).*”

Translated by the author in own words: Eating behaviour is an activity, which happens deliberately or habitual. It includes the food purchasing, preparation, consumption and post processing of groceries by an individual and/or a social group. It can also be conducted for religious-symbolic reasons or be influenced by them. The (...) eating behaviour of an individual is always the result of endogenous or exogenous influences (...) (LEONHÄUSER ET AL. 2009:20).

Ethnic food: Traditional and characteristic food from an ethnic group.

Ethnic group: *“A named social group based on perceptions of shared ancestry, cultural traditions and common history that culturally distinguish that group from other groups.”* (PEOPLES AND BAILEY 2012:389)

First generation migrants: Migrants who were born in India.

Food habits: *“(…) a standardized set of dietary behaviours adopted by most members of a cultural/ethnic group that are passed on from generation to generation.”* (MCARTHUR, ANGUIANO AND NOCETTI 2001:310)

Home country: In the literature on acculturation, different terms exist to describe the two different cultural groups. This study uses the term “home country” to describe the country where the migrants were born and where they spent a predominant time of their life.

Home culture: Stands for the customs, habits, beliefs and values shared by the society of the home country.

Host country: The country where the migrants move to from their home country or from another country.

Host culture: Means the customs, habits, beliefs and values dominant in the host country.

Identity: SCHWARTZ (2001) describes identity as a synthesis of personal, social, and cultural self-conceptions.

Meat: Meat of all edible animals except the meat of fowl.

Non-vegetarian food: Participants often used the term “non-vegetarian” or “non-veg”. This included meat as well as poultry and, depending on the caste, also eggs.

Personal identity: According to ERIKSON (1968), personal identity represents the goals, values, and beliefs which an individual adopts and holds.

Poultry: Domestic fowls; such as chickens, turkeys, ducks or geese, raised for meat or eggs. ¹

Second generation migrants: Migrants who are born in Singapore, with both parents born in India.

Singapore Indian: There is no race existing called “Singaporean”. To distinguish the origin and race of their population, Singaporeans use the term “Singapore Indian” for Indian people who are residents of Singapore of the

¹ <http://www.thefreedictionary.com/poultry>, February 2014

second or third generation or even of the first generation. The term is used in daily life as well as in public, like newspapers or even political speeches.

Social Identity: TAJFEL (1978:63) described social identity as part of “(...) *the individual's knowledge that he belongs to certain social groups together with some emotional and value significance to him of his group membership.*”

Western Food: When participants talked about Western food, this included fast food from Western fast food chains and food from the so called “Western food stalls” in food courts and hawker centres. The term was also used for any food items, which they did not refer to the Indian or another Asian cuisine, like Western bread, jam, cereals, but also vegetables that are not commonly used in India like broccoli or celery.

I INTRODUCTION AND OVERVIEW OF THE STUDY

This chapter describes the motivation for the study and presents the structure of the thesis with a short overview on each chapter.

1. MOTIVATION FOR THIS RESEARCH

The need to investigate eating behaviour of a migrant population.

Migration is a global phenomenon. In 2013, the UN disclosed that 232 million people, or 3.2 percent of the world's population, lived abroad. This indicates a high increase compared with 175 million migrants in 2000, and 154 million in 1990 (UNITED NATIONS 2014).

Migration is related to the interaction of at least two cultures, the culture that the migrants bring from their home country, and the culture they encounter in the host country. According to SANJUR (1982:3) "*culture is a learned experience*" and she drew the conclusion that it can also be unlearned and changed. Her conclusion is confirmed within numerous studies, investigating the acculturation process of migrants and showing that migrants adapt to parts of the host culture, while at the same time they maintain their home culture (KANKIPATI 2012; MAHADEVAN 2003).

By assuming eating behaviour is part of a country's culture, it is likely to change after migrating to a host country. In recent years, there has been an increased interest in investigating this process, also called dietary acculturation.

Results of these studies exposed positive and negative effects of dietary acculturation. Findings like higher intake of fat and energy and a lower intake of fibre might be related to diverse diseases (ALMOHANNA 2010; HOLMBOE-OTTESEN AND WANDEL 2012). While in another study, participants have changed their diet towards a higher intake of fruits and vegetables and less fried foods and sugar (PEREZ-CUETO ET AL. 2009). These are just two examples out of numerous studies on dietary acculturation.

It is noticeable that dietary changes related to negative health effects are prevalently observed among migrants staying in the host country a for longer time (MÉJEAN ET AL. 2009) or living there as the second generation (GILBERT AND KHOKHAR 2008; GUENDELMAN AND ABRAMS 1995; KUDO, FALCIGLIA AND COUCH 2000; LANDMAN AND CRUICKSHANK 2001). Accordingly, studies indicate a correlation between the incidence of disease and the length of stay in the host country. ZIEGLER ET AL. (1993) found in their study a 60 percent higher risk for

breast cancer among Asian-American women, born in the West, compared to Asian-American women born in the East. In the research of KIN ET AL. (1993) U.S.-born Japanese-American women showed significantly higher body fat than immigrant Japanese-American women. The “Healthy Immigrant Effect” shows that migrants who arrive in the host country are on an average healthier than the native-born people are (KENNEDY, McDONALD AND BIDDLE 2006). Over time, these health advantages decrease (FENNELLY 2007).

These facts appeal for more research on eating behaviour of migrant populations to gain a deeper understanding of the whole process in order to counter the negative and support the positive effects of dietary acculturation.

Why was this research conducted on Indian migrants?

Indians constitute the second largest population worldwide at 1.276,5 Billion. With continued growth, it is projected that the Indian population will surpass 1.651,6 Billion by 2050, becoming the country with the largest population in the world (POPULATION REFERENCE BUREAU 2013). Furthermore, India has the second largest diaspora worldwide. In 2012, around 22 Million Indians lived outside their country (MINISTRY OF OVERSEAS INDIAN AFFAIRS 2012).

Studies on dietary habits and eating habits of Asian Indian migrants were conducted in several countries like United States, Europe and Newfoundland (JONNALAGADDA AND DWAN 2002; HOLMBOE-OTTESEN AND WANDEL 2012; RAJ, GANGANNA AND BOWERING 1999; VARGHESE AND MOORE-ORR 2002). Results detected a higher intake of non-traditional Indian foods and drinks such as soft drinks, pizza or mayonnaise (RAJ, GANGANNA AND BOWERING 1999). Furthermore, higher protein and energy intakes were determined (JONNALAGADDA AND DWAN 2002; WANG, KONING AND KANAYA 2010).

Considering India’s large diaspora worldwide and the results of previous studies on dietary habits and eating habits of Asian Indian migrants in other countries, these appeals for investigating the dietary behaviour of Indian migrants in Singapore. Furthermore the intensive relation between Indians, their food and their culture (KAKAR AND KAKAR 2007) provides an interesting foundation for examining how Indian migrants deal with their new food environment.

Why was the study conducted in Singapore?

One main reason was that the researcher stayed in Singapore with her family for some years. Being a nutritionist and a migrant in Singapore for some time,

gave the author the motivation to investigate the dietary acculturation of migrants in the host country.

In 2010, Indian residents and permanent residents formed with 9.2% of the population the third largest ethnic group of Singapore. In opposition to the Malay and Chinese population, there was an increase of the Indian population within ten years (from 7.9% in 2000) (WONG 2011). This percentage does not include non-resident Indians living in Singapore, which are estimated by the Ministry of Overseas Indian affairs with another 350.000 Indians (MINISTRY OF OVERSEAS INDIAN AFFAIRS 2012).

The Singapore National Nutrition Survey 2010 investigated the eating habits of Indians living in Singapore (HEALTH PROMOTION BOARD 2010). However, the National Nutrition Survey examined exclusively eating habits of Singapore residents and permanent residents. There is no detailed data available about the eating habits of first generation Indian migrants in Singapore.

Despite the growing Indian population in Singapore, there is an absence of published research on the process of dietary acculturation of first generation Indians in Singapore. Studies on dietary acculturation of Indian migrants are mostly conducted in so-called “Western” countries like Europe or the United States. There is no study on the eating behaviour of Indian migrants who moved to another Asian country. In addition, it is interesting to examine whether and how Indians change their eating behaviour in Singapore, a country with a relatively high supply of Indian food, in comparison to “Western” countries.

Necessity for a qualitative approach

This present study will be the first one to use in-depth interviews to investigate the dietary acculturation of first generation Indian migrants in Singapore. The qualitative approach has been chosen for several reasons.

The Indian population in Singapore is a heterogeneous group. Although, the focus in this study is on South Indian migrants, this group encompasses a wide range of people speaking different languages, appertains diverse castes, with different life experiences and practicing a variety of eating traditions. This heterogeneous group also has the complexity of eating behaviour in the Indian culture. FISCHLER (1988:289) described: “(...) *cooking helps to give food and its eaters a place in the world, a meaning.*” For Indians several meanings are related to food and their eating behaviour like diverse food taboos, food symbols, food preferences and eating habits based on their religion, caste

system and Ayurveda. The high significance of diet for the Indian population is confirmed by KAKAR AND KAKAR (2007:121):

“There are a few other people as concerned with food as Indians, especially the Hindus – not only with its preparation, but with the effect it has on the human body and mind.”

Considering these aspects, investigating the dietary acculturation of Indian migrants with the intention to gain a comprehensive understanding of the entire process presumes a qualitative approach.

Furthermore, changes in eating behaviour of Indian migrants and affecting factors have been quantitatively measured in numerous studies in other countries (JONNALAGADDA 2002; JONNALAGADDA AND DIWAN 2002; RAJ, GANGANNA AND BOWERING 1999). When investigating affecting factors on dietary acculturation, most studies concentrate on socio demographic factors. However, the process of dietary acculturation has not been elucidated sufficiently. It is not clear why Indian migrants change their diets to certain dimensions. SATIA-ABOUTA (2003) mentioned that in addition to socio-demographic data, the cultural and social background as well as personal attitudes and experiences of migrants affect the process of dietary acculturation. Most studies neglect to investigate these influences.

Ultimately, this is the first study on dietary acculturation of Indian migrants in Singapore. Hence, there is a necessity to gain a comprehensive, in-depth understanding of the situation of Indian migrants in Singapore in terms of culture and food. Therefore, a qualitative approach, allowing an open and intensive conversation with the participants is the most suitable solution.

Summary

In summary there are several reasons, why there is a need to investigate the process of dietary acculturation of first generation Indian migrants in Singapore using a qualitative approach:

- Increasing number of migrants worldwide accompanied by positive as well as negative dietary changes, while the latter might lead to diverse diet related disease
- India has the second largest diaspora worldwide. The Intense relationship between the Indian population, their food and culture provide an interesting foundation to investigate their coping with the new food environment. Furthermore previous studies on dietary acculturation of

Indian migrants in diverse countries identified new eating habits, which might result in negative health effects.

- Increasing number of Indian population in Singapore and the lack of research in eating behaviour of first generation Indian migrants
- Lack of studies investigating dietary acculturation of Indian migrants who moved to another Asian country
- Numerous studies using a quantitative approach for investigating dietary acculturation of Indian migrants, neglecting comprehensive backgrounds. An understanding of culture-driven food preferences, taboos, symbols and eating habits is needed for improved design of methods to communicate nutrition information to Indian migrants

The present study is focusing on the dietary acculturation “outcomes” as well as clarifying how Indian migrants in Singapore arrive at the dietary choices and changes, they make, and which are the major affecting factors. Furthermore, dietary changes will be related to the migrants’ general acculturation in Singapore.

2. ORGANIZATION OF THE THESIS

The Research design describes the organisation of the dissertation, which is subdivided into six chapters as follows.

Chapter I introduces the research and establishes the purpose. In addition, chapter one presents an overview on the contents of the thesis.

Chapter II provides pertinent definitions of the terms “acculturation”, “dietary acculturation” and “migrant” as well as concepts applied in the study. Based on literature reviews, the chapter describes survey-relevant information of the South Indian and Singaporean populations and eating cultures. Furthermore, chapter two specifies the Indian food and culture in Singapore.

Chapter III describes the methods and details the measures used in this study to investigate the dietary acculturation of Indian migrants. The chapter presents the methodology used, data collection and data analysis.

Chapter IV presents the findings of the survey. The socio-demographic data, results of the 24-hour dietary recall, the East Asian Acculturation Measure (EAAM) and the interviews in the form of case analyses are presented. The chapter describes the dietary changes made by the migrants and details the factors that were found to influence the process of dietary acculturation. Furthermore, the relation between dietary acculturation and other acculturation factors are presented in this chapter. The chapter is divided in two parts. Part A describes the findings based on the used instruments. Part B refers the results to the research questions.

Chapter V presents the discussion of the methodological approaches and discusses the findings. The results will be compared with previous studies on dietary acculturation of migrants worldwide.

Chapter VI summarizes the findings of the study. The limitations of the research, as well as a conclusion of the study and directions for future research will be presented.

II THEORETICAL FRAMEWORK

After specifying the motivation, which leads to this study, background information on the topic of the study were investigated by studying literature and conducting fieldwork on Indian food and culture in Singapore.

The Theoretical Framework presents the definitions and concepts of three major issues within this study: acculturation, dietary acculturation and migrants.

BERRY (1997:16) suggested:

“A complete study of acculturation would need to start with a fairly comprehensive examination of the two societal contexts: that of origin and that of settlement.”

In this study, the emphasis is towards dietary acculturation. Therefore, the theoretical framework includes an overview on eating culture in both, the home country of the researched migrant group, which is South India and Singapore as the host country. Cultural backgrounds (language, religion, traditions) of both, the Singaporean and the Indian culture are described, in order to research if there is a correlation between dietary acculturation and the general acculturation of Indian migrants in Singapore.

1. ACCULTURATION

This chapter provides an overview of information concerning acculturation, including the definitions of the term, the acculturation process and measuring methods. Numerous studies have been attempted on acculturation including investigation of the acculturation process as well as of measuring methods. This chapter will focus on information about acculturation that is associated with the subject.

1.1. Definition and acculturation process

Definition

There is no standard definition of acculturation. The classical and widely used definition of acculturation was presented by REDFIELD, LINTON AND HERSKOVITS (1936:149):

“Acculturation comprehends those phenomena, which result when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups”.

A predominant number of studies on acculturation place an emphasis on investigating acculturation of migrants. Little scientific research of the host

culture behaviour has been undertaken (DIXON 2008). Therefore, in the last years most social scientists use the term “acculturation” to describe the process, by which migrants adopt the behaviour and culture of the host country (NEGY AND WOODS 1992). This definition neglects the acculturation process of the host society. The present study refers to the definition of Redfield, Linton and Herskovits (REDFIELD, LINTON AND HERSKOVITS 1936). Although the focus of this study is on the dietary acculturation and cultural changes of the Indian migrants, chapters II 6.2 and III 5.1 describe in which way Indian migrants brought dietary and cultural changes to the Singaporean culture since the countries foundation in 1819.

The acculturation process

Within an acculturation process, two cultures are interacting. Acculturation has to be considered as a process rather than an outcome (BERRY 2006:40). Based on GRAVES (1967), acculturation can be seen on two different levels: the group-level phenomenon, which signifies a change in the culture of the group, and psychological acculturation, which he defined as a change in the psychology of the individual.

This distinction is assumed from SATIA-ABOUTA (2003) who described the acculturation process happens at the micro (individual) and macro (social/group) level.

The micro level focuses on change in attitudes, beliefs and behaviours of individuals. Migrants’ identities, especially cultural and social identity, are likely to change during the acculturation process to different extents. Cultural identity includes components like religion, rites of passage, language, dietary habits and leisure activities (BHUGRA 2004). Hence, changes in customs, habits, beliefs and values will occur. The changes will differ across settings e.g. home, work and social environments. SCHWARTZ, MONTGOMERY AND BRIONES (2006) found, that personal identity can stabilize migrants and protect them from distress created by the acculturation process while social and cultural identity guide and reflect acculturation-related change.

The macro level or also called the “cultural level of acculturation” is based on physical, biological, economic, social and cultural change of groups (BERRY 2005; SATIA-ABOUTA 2003). Physical changes mostly include urbanisation and an increased population density. Biological changes take place with new eating habits as well as exposure to new diseases. Both affect the health status of the whole group. A loss of social status or new fields of work for the group can

characterize economic changes. Disrupted communities on one side and new important connections on the other side represent social changes. Cultural changes, forming the core of the acculturation process, include a wide range of changes like food and clothes, language shifts, religious conversions and fundamental alterations to value systems (BERRY 2005).

When investigating acculturation of migrants it is important to attend to both levels, as not all migrants experience the general group acculturation in the same way (BERRY 1997).

This study investigates the acculturation process of Asian Indian migrants on the individual level. Furthermore, it will provide a comparison to the level of group acculturation of Indians in Singapore in the discussion chapter. Furthermore, chapter II 6.2 provides an overview on the Indian culture in Singapore, representing the actual status of the Indian group acculturation.

Acculturation models

Two predominant models describe the acculturation process: the unidimensional and the bidimensional model. They mainly differ in their explanation on the relation between the home and the host culture.

The unidimensional model assumes that cultural identity changes along a single continuum over a time spread. This means migrants give up the values, attitudes and behaviours of their home culture, while they simultaneously adopt those of their host country (GORDON 1964). The two identities are negatively correlated which means when one identity is strong the other one is weak (PHINNEY ET AL. 2001). According to this model, the sole result in context to acculturation is assimilation (LAFROMBOISE, COLEMAN AND GERTON 1993). In other words, the individual is continuously identifying and interacting with the host culture while at the same time giving up the home culture gradually.

The bidimensional model examines the migrant's identification with the home culture and the culture of the host country separately and as being independent of each other. Accordingly, migrants may adopt values and behaviours of the host country without giving up their home culture (BERRY 1997).

The most common bidimensional acculturation model is the one of BERRY (1980). As shown in Figure 1, the model is based on two fundamental questions, which all migrants in the host country are confronted with.

Not all individuals acculturate in the same way. Based on the two questions of Berry and the possible answers, there are four acculturation strategies, which demonstrate how migrants undergo the acculturation process (BERRY 2005).

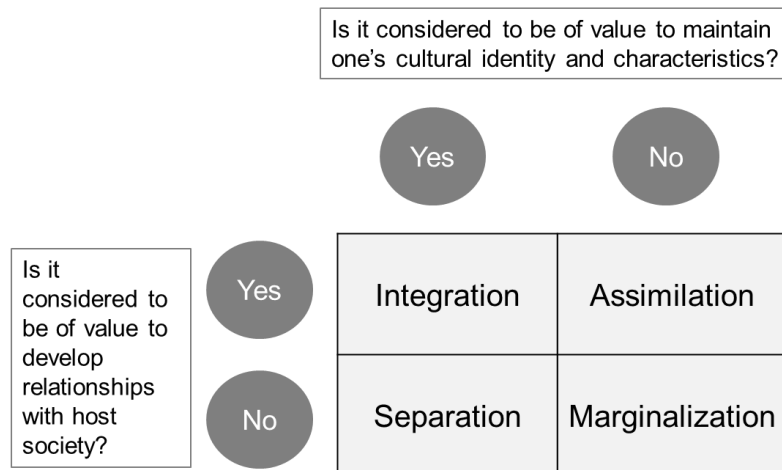


Figure 1: Acculturation strategies (source: modified from BERRY 1980)

The acculturation strategies are the product of the interaction of the dimensions shown in figure 1 as follows:

Assimilation: The individual prefers to decrease the significance of the home culture and wishes to identify and interact primarily with the host culture.

Separation: The individual makes a point of holding on to their original culture while at the same time avoiding interaction with the host culture

Marginalization: The individual is not interested in cultural maintenance and at the same time does not want to interact with the host culture

Integration: The individual is interested in both maintaining the home culture and interacting with the host culture (BERRY 2005).

Based on REDFIELD, LINTON AND HERSKOVITS (1936:149) definition of acculturation, both the host and the home country are engaged in the acculturation process. Therefore BERRY (2005) included a third dimension. When the host society seeks assimilation, it is called the “*melting pot*”. Segregation is the used term when the host society demands separation. For marginalization, when imposed by the host society it is a form of exclusion. When cultural diversity is an accepted feature of the host society and accordingly they endorse integration the respective strategy is multiculturalism.

A number of studies have found integration as the most preferred acculturation strategy among migrants (BERRY ET AL. 1989; NETO 2002). An integration

strategy assumes a multicultural host country, which is maintaining diverse pre-conditions (BERRY AND KALIN 1995) like appreciating a society of cultural diversity, low levels of prejudice and positive common attitudes among cultural groups (BERRY 2005). Therefore, when investigating acculturation, it is important to know the historical and attitudinal situation faced by immigrants in the host culture.

Integration, and separation, can only be implemented when there are more members belonging to the home culture who share the wish to keep their culture. Hence, integration and separation are “collective”, while assimilation is more “individualistic” (LALONDE AND CAMERON 1993), which also applies to marginalization.

Affecting factors on the acculturation process

Based on the two levels of acculturation, factors affecting the acculturation process can be classified into macro level factors and micro level factors as shown in Table 1.

Table 1: Factors affecting the acculturation process (source: modified from Berry and Sam 1997:, table 8-1)

Factors	Characteristics	Examples
Macro level		
Home country	Political context	Civil war, repression
	Economic situation	Poverty, famine
	Demographic factors	Population explosion
	Collectivist or individualist society	
Host country	Immigration policy	Multiculturalism
	Immigration history	Longstanding or recent
	Attitudes towards immigration and specific groups	Favourable or unfavourable
	Collectivist or individualist society	
Acculturating group	Physical	Rural or urban
	Biological	Nutrition, disease
	Social	Loss of status
	Economic	Isolation
	Cultural	Dress, food, language

Factors	Characteristics	Examples
Micro level		
Factors prior to acculturation	Demographic	Age, gender, education
	Cultural	Language, religion, food, cultural distance
	Economic	Status
	Personal	Health, knowledge, values
	Migration Motivation	Push or pull
	Expectations	Excessive or realistic
Factors arising during acculturation	Acculturation strategies	Integration, assimilation, separation, marginalization
	Contact/participation	participation or isolation
	Cultural maintenance	Maintain or neglect
	Social support	Appraisal and use

When focusing on the group level of the acculturation process, major influences come from the home and host countries. Political, economic and demographic conditions faced by individuals in their home country are likely to influence their motivation for migration and further their acculturation strategies based on Berry's model (BERRY 2005). On the contrary, general orientations of the host country are significant to the migrants' adjustment during the acculturation process. As described above, a society that encourages multiculturalism provides more options for integration and allows them to be bicultural (PHINNEY ETAL. 2001).

It is also important to consider whether the home as well as the host country is a collectivist or individualist society. Individualism applies to societies where the relationships between the individuals are loose. Individuals are expected to look after themselves and immediate family (HOFSTEDE, HOFSTEDE AND MINKOV 1991). In individualistic societies, the interests of the individual take priority over the interests of the state or social group.

Collectivism refers to societies in which people are congenitally integrated into strong in-groups, which are lifelong to protect them in exchange for unquestioning locality (HOFSTEDE, HOFSTEDE AND MINKOV 1991). Collectivist societies privilege common good and social harmony over individual interests.

Individualistic societies support the basic principle of liberalism. Individuals in these societies are rational and make personal choices based on reasons.

Collectivist societies are more likely to maintain traditionalism. Concessions and compromises are made to meet the groups' interest.

Asian countries mostly tend towards collectivist cultures, while Western countries lean towards individualism. Both individualism and collectivism can be considered as part of cultural identity (TRIANDIS 2001) and orientations towards one of them are likely to change during the acculturation process. BHUGRA (2004:137) assumed that individuals from a collectivist society “(...) *will face different types of stresses if they migrate to an individualistic society (...)*”.

SINHA ET AL. (2001) analysed the collectivist and individualist behaviour and intentions of Indians. Their results showed a purely collectivistic behaviour concerning family or family members. When important personal needs converged with family or friends interests, participants showed a mix of individualist and collectivist behaviour.

On the micro level, influences on the acculturation process can be distinguished between factors that already exist prior the acculturation process started and those factors, which arise during the process (BERRY AND SAM 1997).

The demographic variables age and gender are consistent predictors of acculturation. Studies on gender and migrants psychological wellbeing suggest that women tend to experience higher levels of stress and therefore have more difficulties to adapt in the host country than men do. Reasons therefore include that women receive lesser assistance with personal and job-related problems than men do (PIPER 2005).

Another key determinant of acculturation is the migrants' skill in speaking the host country's dominant language (KANG 2006). Language can be considered as “a carrier of cultural meanings” (LAU, LEE AND CHIU 2004:77). It provides the prime option for exchanging and sharing cultural information. The negative relationship between poor language skills and adaption in the host country has been investigated by CABASSA (2003) and RODRIGUEZ ET AL. (2002).

Further factors influencing the acculturation process, but not explained here in details, are shown in Table 1.

1.2. Methods for measuring acculturation

Acculturation is a complex process affected by diverse factors. Hence, it is difficult to quantify. There is no common agreement among scientists on measures of acculturation. Numerous measures and scales have been

devolved and there is a close link between theoretical models as described above and measurement methods (BERRY 2006; KANG 2006). Therefore, it can be distinguished between unidimensional and bidimensional measurements. The general purpose of all acculturation measures is to investigate how migrants are adapting to a new cultural context.

Unidimensional approaches typically use affecting demographic or cultural factors listed in Table 1 such as language, food and age, but also applied media or the numbers of years spent in the host country are common researched factors (HWANG AND HE 1999; KANG 2006; PÉREZ-ESCAMILLA AND PUTNIK 2007).

Unidimensional measures have been criticized, as they are unable to manage situations in which individuals maintain their home culture completely or in certain parts while they adapt at the same time completely or partly to the host culture (CUELLAR, ARNOLD AND MALDONADO 1995). For example concerning language this would mean, that migrants adopt the language of the host country while the skill to speak the mother tongue decreases. As CABASSA (2003:133) described: “(...) *The unidimensional model restricts individuals to carry only one piece of cultural luggage.*”

According to this critique, several researchers have generated complex unidimensional models including multiple factors with regard to the researched issue (SUNKYU ET AL. 1994).

However, based on the described limitations of the unidimensional instruments, they have been replaced by increasingly sophisticated bidimensional measures. RYDER, ALDEN AND PAULHUS (2000) concluded from three comparative studies that the bidimensional conception, measuring independent heritage and mainstream dimensions of culture, constitutes a broader framework for understanding the acculturation process than the unidimensional approach.

Most bidimensional measuring methods are based on the bidimensional acculturation model of BERRY (1980). Berry and his colleagues evolved four separate acculturation measures: the integration, assimilation, separation, and marginalization tests (BERRY ET AL. 1989). The four strategies are measured independently. This enables the researcher to investigate how strategies relate to each other.

Still, the bidimensional measures have also been criticized. DEL PILAR AND UDASCO (2004) put the practical possibility of marginalization into question. The authors justified that even in case of colonization and discrimination migrants will reconsider their home culture in order to be “cultureless”.

Overall, there are certain drawbacks associated with the use of acculturation scales (HUNT, SCHNEIDER AND COMER 2004). CABASSA (2003) recommended in her critical investigation on acculturation scales, that research on acculturation needs to include facts beyond proxy measures like the migrants age at immigration, time spent in the host country or language spoken at home, as these measures do not help to understand the process of acculturation. In her recommendations, she requested to choose acculturation aspects, which are more basic to cultural change. Instead of investigating age or language as acculturation aspects, surveying how moving from the home culture to the host culture affects the migrants' cultural orientation would be more instructive.

ARENDTS-TÓTH AND VIJVER (2006) recommended considering the following steps when choosing or designing an instrument to measure acculturation:

1. The clear formulation of research goals
2. Which acculturation factors are dealt with
3. The choice of research methodology
4. The choice of a measurement method
5. The choice of life domains and situations to be dealt with in the items
6. Choice of item wording

For a broad overview on acculturation measuring methods the author refers to the studies of OZGUR AND VAN DE VIJVER (2011).

2. DIETARY ACCULTURATION

In this chapter, the process of dietary acculturation will be described, including the applied definition, affecting factors on the process and methods to investigate dietary acculturation.

2.1. Definition and process of dietary acculturation

Definition

Similar to the term “acculturation” there is no standard definition of the term “dietary acculturation”. SATIA-ABOUTA ET AL. (2002a:1105) described dietary acculturation as the process by which migrants “(...) *adopt the dietary practices of the host country.*” However, this definition neglects the fact that people from the host countries also adapt eating habits as well as ingredients passed down by migrants. This setting is given in Singapore where influences from the Indian cuisine can be seen in form of Indian food available in local supermarkets, in hawker centres and food courts as well as fusion food restaurants and authentic Indian restaurants. Another typical and well-known example for influences born

by migrants is the countywide use of curry in the UK, which British people named among their top three favourite foods (MITCHELL 2006). These two examples, out of many, show that the perspective of the host country is of prime importance in the definition of “dietary acculturation”. Therefore, in this study “dietary acculturation” is defined as the process that takes place when groups of individuals with different cultures come into continuous first-hand contact with subsequent changes in the original eating behaviour of either or both groups. This definition is built on REDFIELD, LINTON AND HERSKOVITS’ (1936) definition of acculturation.

The dietary acculturation process

Eating is not only a process to satisfy the physical hunger. The process of eating is related to several aspects like pleasure, health and wellbeing as well as to risks and diseases (LEONHÄUSER 1995:5). These aspects need to be included in investigations into dietary acculturation. Furthermore, to consider dietary acculturation as part of the acculturation process, eating behaviour needs to be viewed in the context of personal, cultural and social identity. Other than animals, most of the foods consumed by humans are not eaten raw. Food gets arranged, prepared and cooked. In other words, it is transformed into a dish. This whole process including the selection of edible food, preparing, cooking and eating is historically embedded and is deeply affected by cultural and religious attitudes (GRUENSCHLOSS 2008). Accordingly, food can be seen as one symbolic function of cultural identity and as a “*key cultural expression*” (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; PEÑALOZA 1994:42).

BHUGRA AND BECKER (2005) stated that attitudes to food and food preparation, including religiously driven taboos and the symbolism of food, are a part of cultural identity. Also food choice can be classified as a “(...) *fundamental component of individual and cultural identity* (...)” (WILLETTS 1997:128)

According to LEVI-STRAUSS (1966) culture defines how possible nutrition is coded into acceptable food. While ecological, biological, and economic influences affect the individuals’ food choice, the cultural understanding and categorisation structures food as edible or inedible and as part of the world. He interpreted food as a cultural system and within this system “*taste*” is culturally shaped and socially controlled.

Hence food is also a fundamental part to humans individual identity as “*any given human individual is constructed, biologically, psychologically and socially by the foods he/she chooses to incorporate.*” (FISCHLER 1988:1)

Bearing in mind food is such a deeply rooted component of culture and identity, it is of great significance to investigate how strong boundaries between the individuals and ethnic groups unique eating habits become loose within the process of dietary acculturation.

Dietary acculturation is a complex process and it is unlikely a unidimensional process from the traditional diet to the diet of the host country. Instead, for migrants in a host country food is an important source for identifying with their ethnic background. As KALCIK (1984:37) wrote: *„Traditional foods and ways of eating form a link with the past and help ease the shock of entering a new culture.“*

Hence, the bidimensional model of acculturation will be more relevant for analysing the dietary acculturation process. Migrants maintain their traditional eating habits while at the same time they adopt eating habits and food from the host country (JAMAL 2003; MÉJEAN ET AL. 2009). This behaviour often results in a new dietary pattern, for example in form of skipping or including new meals or in adjusting traditional recipes with available ingredients in the host country (KOCTÜRK 1995; RENZAHO AND BURNS 2006). RAJ, GANGANNA AND BOWERING'S (1999) study on eating habits of Asian Indian migrants in the US support these findings. Their results indicate that participants in the host country adhere to specific ethnic traditions, while at the same time they adopt food habits of the host country. RENZAHO AND BURNS (2006) found African migrants preparing traditional recipes by substituting absent or inaccessible ingredients with available local ingredients, e.g. lamb was substituted for camel meat. Furthermore, migrants started to include breakfast in their meal pattern. First-generation Chinese immigrants in Nebraska were found to use foods from the host country (like canned US vegetables) to prepare traditional Chinese dishes (SATIA-ABOUTA ET AL. 2002a).

Different dimensions of changes have been noticed within the daily meals. While dinner is often kept traditional (LEE, SOBAL AND FRONGILLO 1999), breakfast, lunch and snacks are more likely to be changed and adapted towards the host countries foods. Breakfast is supposed to be the first meal undergoing an acculturation process (CRANE AND GREEN 1980; GRIVETTI AND PAQUETTE 1978; LI 2010; SATIA ET AL. 2000). Furthermore, there is a preference for the weekend diet to be more traditional than the weekday diet (LI 2010; RAJ, GANGANNA AND BOWERING 1999) and the *“Everyday-Food”* changes before *„Holiday food“* (KOCTÜRK 1995).

The *“Health immigrant effect”* is also related to the process of dietary acculturation. The effect is described by several researchers and it shows that

migrants generally arrive in the host country with better health conditions than the host countries native inhabitants. However, over time this health advantage disappears (DERI 2004; HEATHER AND KELLY 2006; KENNEDY, McDONALD AND BIDDLE 2006). Changes in diet and an increased intake of tobacco and alcohol combined with a decrease in physical activity are supposed to be responsible for the declining health conditions.

The complex process of dietary acculturation is affected by diverse factors as presented in SATIA-ABOUTA'S (2003) model (Figure 2). Her model identifies socioeconomic, demographic and cultural factors interacting with exposure to the host culture. This exposure, in turn, leads to changes in attitudes, beliefs about food, taste preferences, as well as changes in food purchasing and preparation. All of these factors, then lead to changes in the dietary pattern.

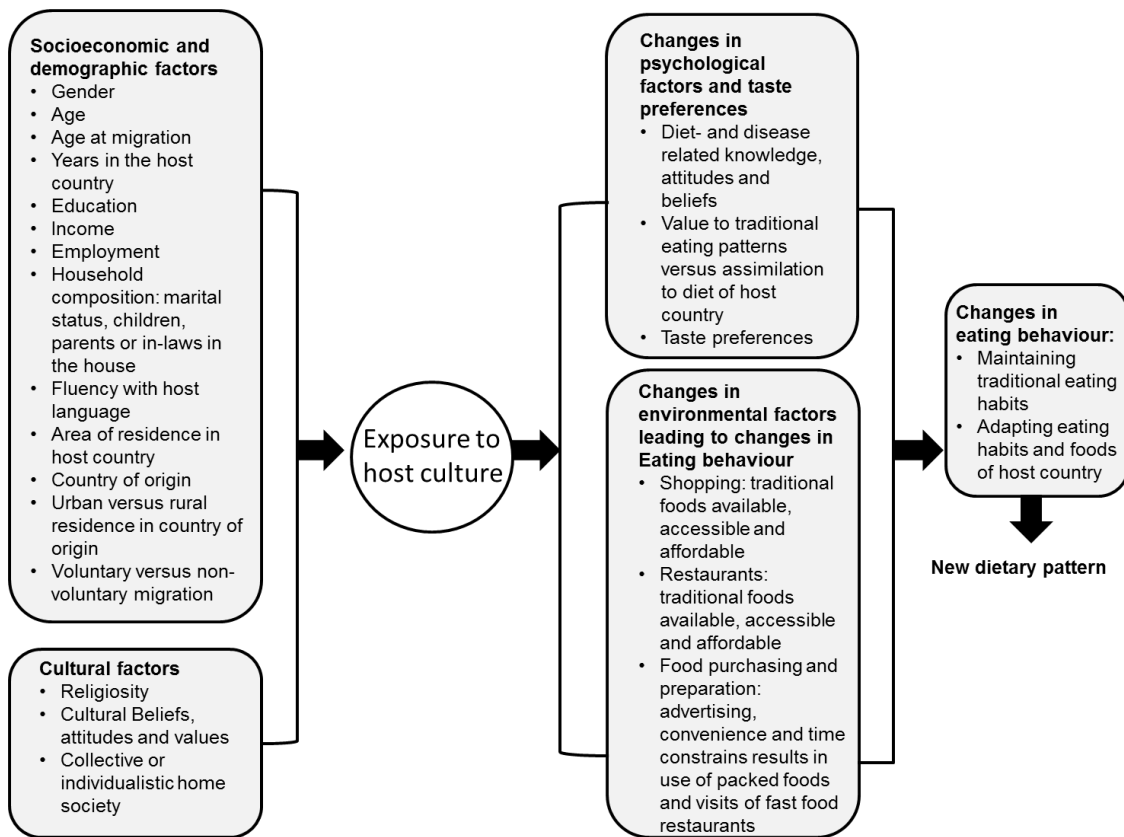


Figure 2: Proposed model of the dietary acculturation process (source: modified from SATIA-ABOUTA ET AL. 2002a)

Results of studies on affecting factors on dietary acculturation are described below.

The length since living in the host country is supposedly related with dietary acculturation. Studies found prevalence for excess weight and obesity increasing with the length of time staying in the host country (CAIRNEY AND OSTBYE 1998; HIMMELGREEN ET AL. 2004). CAIRNEY AND OSTBYE (1998) assumed

that this might be affected by an increasing overall caloric intake or increasing proportion of calories from fat. MÉJEAN ET AL. (2009) found a higher intake of meat for male Tunisian migrants living in France for more than ten years compared with male migrants staying there less than ten years. In the study of ROSENMÖLLER ET AL. (2011) the length of residence of Chinese migrants in the United States was significantly associated with portion size, a higher consumption of convenience foods, a higher frequency of consuming restaurant meals/dining out and less preparing food through boiling. Accordingly, to the influence of length of time living in the host country, different eating patterns have been observed between generations. KUDO, FALCIGLIA AND COUCH (2000) showed in their study, that first generations Japanese women in the United States were more likely to maintain their traditional diet, while second and third generations women adopted more and more foods and eating patterns of the host country. First generation Mexican-American Women in GUENDELMAN AND ABRAMS (1995) research were observed to have a higher average intake of protein, vitamins (A, C, and folic acid) and calcium compared to second generation Mexican-American Women and White Non-Hispanic Women.

Some studies have also shown an impact of age on dietary acculturation. Older migrants are supposed to prefer their traditional diet, while younger migrants, who are mostly employed outside home are more likely to change their eating habits and furthermore do not believe the traditional diet to be more healthy (SATIA-ABOUTA ET AL. 2002b). Also PAN ET AL. (1999) found younger migrants in general more readily to change their food habits compared to older ones.

A number of studies reported different dietary changes as subject to the migrants' gender (JASTI, LEE AND DOAK 2011).

JASTI, LEE AND DOAK (2011) found Korean male migrants in the United States more likely to be overweight compared to Korean migrant women. The overweight men showed a more frequent consumption of fast foods, hot dogs and tacos. Converse results are shown in the study of PENG (2005) concerning dietary acculturation of Chinese students in the United States. Results showed more Western orientated eating habits for female Chinese students compared to the male students. The authors considered the women's higher involvement in cooking and foods shopping as one reason for the results.

The migrants' income might be a positive as well as a negative affecting factor to the process of dietary acculturation, depending on the prices of ethnic as well as local foods in the host country. Asian students in the United States ate more fast food than ethnic meals as fast food was more economical (PAN ET AL. 1999); while first generation Mexican American women's food choices

decreased in nutritional value as their income increased, probably because women reduced their maintenance of a traditional Mexican diet. In other words, the lower their income, the healthier was their diet (GUENDELMAN AND ABRAMS 1995).

Higher skills in speaking the host countries native language were found to be unfavourable to dietary changes, leading to a decreased consumption of fibre, fruit and vegetable intake or an increased intake of artificial drinks (HIMMELGREEN ET AL. 2005; MONTEZ AND ESCHBACH 2008). It is likely that good speaking skills of the host language can be an affecting factor for dietary changes as it leads to a better understanding of nutrition information. However, the influence of language speaking skills to dietary changes might be secondary as the study of SATIA-ABOUTA ET AL. (2002b) showed that even migrants with very good skills in speaking the host language might maintain their traditional diet for other reasons.

Studies investigating the correlation between religious dimensions and eating behaviour are rare. Numerous food restrictions and taboos exist in most religions and their influence on dietary acculturation might be presumed. BONNE ET AL. (2007:267) found for Muslim migrants in France that *“more (vs less) ‘religious’ consumers are more sensitive to the norms and rules prescribed by their religion, while less (vs more) ‘religious’ consumers make more ‘egocentric’ (...) consumption decisions.”*

The household composition can be a significant factor on migrants eating behaviour. SATIA-ABOUTA ET AL. (2002b) found older relatives preferring a traditional diet had a strong influence on the diet of all members living together in the household. Even if the younger family members in the house have extensive exposure to the host country in form of fluent language skills and working outside home, they will keep their traditional diet due to the elderly's strong influence. Also PAPADAKI AND SCOTT (2002) showed in their study on the eating habits of Greek students in Scotland that the household composition is an affecting factor. Most of their participants (70%) lived at home before moving to Scotland. At home, usually their mother purchased and prepared the food, while in the host country participants took responsibility for their food by themselves for the first time. The authors suggested this fact had amongst others an influence on the participants' dietary changes.

Previous studies found ethnicity as an affecting factor on the migrants eating behaviour. In an investigation into the influence of ethnicity on food choices DEVINE ET AL. (1999) identified that the factors influencing food choice differ depending on the ethnic group. Not only the different eating cultures, also the

importance of food in the migrating ethnic group is of significant relevance for dietary changes in the host country. HODGES AND WIGGINS (2013:261) found in their study of migrants in London that the participants cultural traditions affected the intake of “*culturally specific food items*”. While the participant from Pakistan, who also lived longest in London, maintained her traditional diet as much as possible to keep family traditions alive, another participant from Russia living in London since six years was open to try every local food and to “fit in” the new culture. In this study, the culture of origin as an affecting factor on dietary acculturation overlaps the length of residence in the host country. The latter did not affect the migrants eating behaviour in this study.

Exposure to the host country in form of media, colleagues or friends may also affect dietary acculturation by changing knowledge, attitudes and beliefs concerning diet and health. For example, nutrition messages in the host country can change beliefs about diet and chronic disease risk and result in healthier eating habits (SATIA-ABOUTA 2003). In the study of ROSENMÖLLER ET AL. (2011) findings showed that over 60% of Chinese migrants got more information on healthy food choices through the media since living in Canada. Authors suggested that this fact might be related to a higher consumption of healthy foods.

Dietary acculturation is also linked to the availability and affordability of ethnic foods. The lack of food from the home country may force dietary acculturation due to the replacement of traditional foods by food items from the host country (RENZAHO AND BURNS 2006). It is supposed to be one of the most affecting factors as unavailability or high prices do not provide migrants any other choice than changing their diet to a certain degree. KOC AND WELSH (2002) study on African, Somalian and Vietnamese migrants in Toronto showed that with some exceptions, migrants were able to find foods similar to those in their home country. However mostly they found the ingredients to be very expensive.

Besides the described influences from socio-demographic as well as cultural factors and derived affecting factors, migrants often mention the lack of time and convenience as reasons for their dietary changes in the host country (LEE, SOBALAND FRONGILLO 1999; PAN ET AL. 1999).

In addition to SATIA-ABOUTA’s (2003) model, MAHADEVAN (2003) identified three further models and theories providing a suitable framework to study the process of dietary acculturation of Asian Indian migrants within a qualitative approach.

The first one is KOCTÜRK’s (1995) Food Patterning Model to structure food habits. It provides a good basis for focusing on changes within food groups. She

classifies food items into three major groups as shown in Figure 3. The groups describe the strength with which the foods are bonded to the migrants' cultural identity.

Staple foods: take on a central role and signify a strong attachment to the culture. They are characterized as carbohydrate rich foods, mild or neutral in taste, inexpensive, available and part of most meals.

Complementary foods: complete the meal together with staple foods. They are usually one or more items out of the food groups: meat, fish, eggs, milk, cheese, vegetables and legumes. Different priorities are given to these groups depending on the culture. However, compared to the staple food the role of complementary food is secondary and they are more likely to be substituted by migrants.

Accessory foods: are defined as “accessories to basic foods (the staple and the complements) because their culinary role is mainly to enhance the palatability and presentability of meals.” (KOCTÜRK 1995:3) This group of foods includes fats, herbs, spices, sweets, nuts, fruits and drinks. For these foods, priority is given to taste over identity.

As shown on the right in Figure 3, food items belonging to the “accessory foods” are most likely to be changed or substituted first, while staple foods are maintained longest. Complementary foods are in-between these two. Hence Koctürk interpreted accessory foods “(...) constitute the weakest point through which a culinary tradition can be infiltrated with new items (....).” (KOCTÜRK 1995:4)

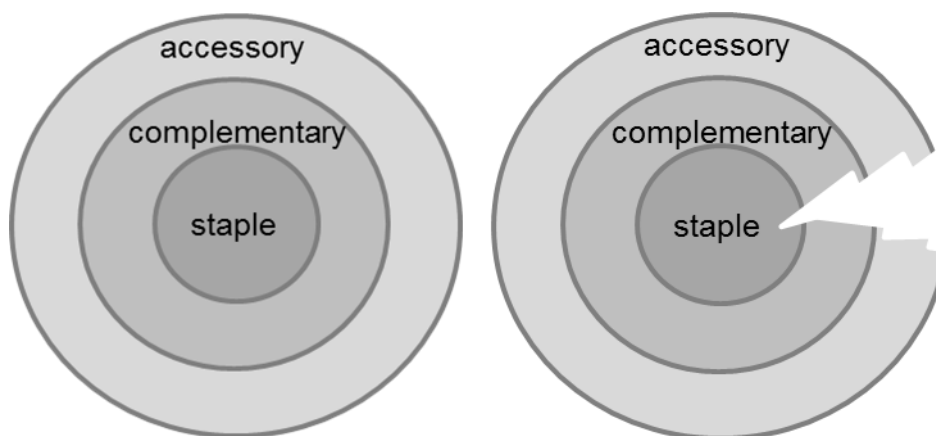


Figure 3: Koctürk's Food Patterning Model (source: modified from KOCTÜRK 1995)

The “gatekeeper-channel” theory of LEWIN (1943:37) also provides a suitable framework. He suggested that the question “*why do people eat what they eat?*” can be answered by information on the question “*how does food come to the table and why?*”. This happens through various channels controlled by the

“gatekeeper”, the primary person who is responsible for food selection and preparation. To understand eating habits and changes in food selection LEWIN (1943) recommended studying the social and psychological characteristics of the “gatekeeper”.

HOLMES AND CLARK (1992) mentioned two “trends” used by researchers to classify dietary changes. One group of researchers viewed dietary changes as positive. While the other group, classified changes towards a Western diet as negative. In contrast HOLMES AND CLARK (1992) noted in their study on “Diet, acculturation and nutritional status in Venezuela's Amazon territory” that dietary changes did not cause negative effects to the participants' nutritional status but also the changes did not lead to a healthier population. Therefore, the authors suggested that it is difficult to classify dietary changes in total as explicitly positive or negative.

2.2. Methods for measuring dietary acculturation

Previous studies on dietary acculturation used three major approaches: single item measures of general acculturation, acculturation scales and food based assessments (SATIA-ABOUTA 2003). The approaches are considered in the following.

Single item measures are very general and may not provide sufficient information to understand the comprehensive process of dietary acculturation. As shown in the study of ROSENMÖLLER ET AL. (2011) a strong relation to the home culture can be more affecting to the migrants eating behaviour than the length of stay in the host country. Further, even a strong connection to the home culture might be influenced by the price or availability of ethnic food in the host country. Affecting factors on dietary acculturation are complex and often influencing or depending on each other. Therefore, single item measures alone might not be a meaningful instrument for measuring dietary acculturation.

Acculturation scales measure several aspects of acculturation and provide therefore a more comprehensive result (SATIA-ABOUTA 2003). However, scales face participants with a set of responses to choose from and to categorize migrants based on the answers into different levels of acculturation. Finally, they correlate these acculturation levels with dietary changes (HIMMELGREEN ET AL. 2007). The scales do not afford scrutinising attitudes, beliefs and activities and do not provide a deep understanding of the individual's acculturation process. Moreover, acculturation scales in general do not include diet related questions.

Food-based measures might be most suitable for measuring dietary changes as they investigate eating patterns. Food lists, dietary acculturation scales and

food frequency questionnaires are the most common food-based measures (KUDO, FALCIGLIA AND COUCH 2000). However, the food-based measurements investigate exclusively changes in the migrants eating habits, but they neglect to examine cultural, socio-demographic and personal factors affecting the process of dietary acculturation. Hence, food-based measures are not able to provide a comprehensive analysis of the whole process of dietary acculturation.

This critical consideration of measurements for dietary acculturation showed that using only one of these measurements would not provide comprehensive results. Consequently, a combination of instruments is needed to carry out a comprehensive analysis.

Previous studies on dietary acculturation often used quantitative approaches to investigate the process. However, during the last years more studies on dietary acculturation in the context of the acculturation process were conducted using qualitative approaches for receiving a comprehensive result (HIMMELGREEN ET AL. 2007; HODGES AND WIGGINS 2013; MAHADEVAN 2003).

3. ACTUAL STATE OF RESEARCH: ACCULTURATION AND DIETARY ACCULTURATION OF INDIAN MIGRANTS WORLDWIDE

According to the MINISTRY OF OVERSEAS INDIAN AFFAIRS (2012) the largest Indian Diaspora is living in the United States. This might be one reason for, why most studies on acculturation of Indian migrants are conducted there.

Acculturation

Detailed examination on the "Acculturation of Asian Indian Woman in the United States" by KANKIPATI (2012) showed, that a majority of the respondents in her study used the integration strategy based on Berry's model. Socialization with Americans, preference in entertainment, social support and English proficiency were found to be statistically significant in influencing this strategy. Participants in her study showed good skills in reading, writing and understanding English language. Furthermore, the results indicate that Asian Indian women who spoke more than one Indian language were more likely to integrate to the US, probably because they hold an adaptive skill. Moreover, women who migrated to other places before coming to United States were more likely to integrate. A high income (>60.000US\$) and age (older than 30 years) at time of migration influenced the integration strategy in positive way (KANKIPATI 2012).

SARAN AND EAMES (1980) found first generation Indians in the United States very eager to keep their basic religious and cultural identity. Even migrants, who had not been very religious while living in India, started to focus more on religion since living in United States in order to maintain their home culture. These findings are supported by the research of RAYAPROL (2005). In her study, first generation Indian woman in United States stated, that they became even more religious after their first child was born. Mostly, the mothers rather than the fathers encouraged the children in learning about Hinduism by joining dance classes, reading about Hinduism or watching videos of Hindu mythological dramas. Furthermore, most Indian-Americans from the first and second generation understood one Indian language. Second generation young Indians liked to maintain their Indian roots by wearing traditional Indian clothes for special occasions (RAYAPROL 2005).

In her research on South Asian Canadian Women NAIDOO (2003) reported that Indian women coming from more liberal, educated, urbanized and westernized families carried a “*cultural baggage*” that they needed to rethink. Consequently, Indian migrant women are much more subject to significant changes than their counterparts in India are. However, there are still the Indian migrant women who are more inclined to follow Indian traditions in the family and are eager to refer the Indian culture to their children (DASGUPTA 1998:969; RAYAPROL 2005). Interestingly there are often the migrant Indian men who plan to move back to India one day (RANGASWAMY 2000).

RANGASWAMY’S (2000) study on Indian migrants in Chicago found middle class Indians to be the ones who mostly visited temples. While the early migrants from the high-income group were the ones who celebrated religious functions regularly. 68% thought themselves to be more Indian than American and 78% stated to be “*very attached*” or “*somewhat attached*” to their homeland. Overall women were more attached than men were (RANGASWAMY 2000).

MEHROTRA (2004) showed in her research “Triple Outsiders’ Gender and Ethnic Identity Among Asian Indian Immigrants” that manifestations of Indian identity like food, clothing, language and fulfilment of family responsibilities become markers of identity after the migrants moving to the United States because they “(...) *can no longer be taken for granted*”. (MEHROTRA 2004:43) Thus it makes the migrated men’s and women’s roles as spouse and parent more prominent. At the same time, their identity as Hindus came to the fore. They socialised with other Hindus and lived Hinduism in new and unique ways. Due to migration, the responsibility of women as religious functionaries and socialization agents increased. In addition, they undergo changes in their daily domestic labour by

resuming more responsibility. Most migrant women cannot access domestic help or support by other female family members like mother or mother-in-law. On the other hand, diverse household appliances unburden their work. Migrated Indian men were found to spend more time with the family and to help out in domestic work. However, the traditional role allocation between Indian women and men were maintained as men kept being the economic providers of the family while women maintained the role of primary caregivers and if they have paid employment, it is mostly secondary to their home-making tasks. Women were even found to depend more on the husbands because United States visa regulations restricted them from paid employment. Her results indicate that women and men assimilate at different rates and in different areas, based on gender and are affected by the changes in men and women's responsibilities after migrating. Based on these results, MEHROTRA (2004) concluded that migrant research is incomplete if it lacks to investigate gender.

Dietary Acculturation

A predominant number of studies on diet, eating pattern and eating behaviour of Indian migrants were conducted in the United States. However, most Indian migrants in the United States are Gujaratis from West India and Punjabis from North India or from other Hindi speaking Indian states. Only around 20 to 25% of the Asian Indian population in the United States is supposed to be from a South Indian state (RANGASWAMY 2000). Hence most of the studies conducted in the United states include a population of Gujaratis and Punjabis (CHAPMAN, RISTOVSKI-SLIJEPCEVIC AND BEAGAN 2011; JONNALAGADDA AND DIWAN 2002) or a population of Indians from all over the country (MAHADEVAN 2003). This fact has to be considered as India has a high diversity in eating habits and diet (MAHADEVAN 2003). Ethnicity therefore might affect dietary changes of Indian migrants in the host country as shown in the study of JONNALAGADDA (2002).

Furthermore, past research often grouped the Asian Indian population as a subgroup mostly of the Asian population. These studies are not considered in this review, unless the results are definitely describing the Indian population separately. Eating cultures are very diverse within the Asian population and a survey reflecting the eating habits of migrants from the entire Asian continent cannot be representative for Indian migrants.

In their research KARIM ET AL. (1986) suggested that acculturation of food consumption patterns of Indian immigrants to the United States may be manifested in different forms like the modification of vegetarian status, alteration

in meal patterns and a change in the frequencies of use of ethnic foods, as well as foods from other cultures available in America. These findings were predominantly confirmed by the following studies.

VARGHESE AND MOORE-ORR (2002) in their study on dietary acculturation and health-related issues of Indian immigrant families in Newfoundland reported that Indian immigrants maintain some of their traditional eating habits and at the same time adapt to some Canadian foods. Traditional Indian food was mainly eaten for dinner, while breakfast, lunch and snacks often included Canadian foods. Furthermore, they found an increased consumption on meat, soft drinks, alcohol, convenience foods, deep-fried foods and butter/margarine spreads.

These findings were strengthened by the results of RAJ, GANGANNA AND BOWERING (1999). They investigated the eating habits of Asian Indians in relation to length of residence in the United States and found Asian Indians to maintain their traditional eating habits while also including many foods from the United States in their daily meals. 63% of the participants preferred mostly Indian foods, 31% preferred traditional and non-traditional food equally, and 6% preferred one or the other exclusively. Long-time residents (> ten years living in the United States) reported to consume traditional foods mostly for dinner and for weekend meals or snacks. Results showed an increased consumption of fruit juice, chips, fruits, margarine, cola and alcoholic beverages, regardless of the length of time living in United States. They also identified a significant reduction in the consumption of ghee, yoghurt, butter and milk for long-time residents (>ten years living in United States). The authors stated that an increased awareness on the health effects of these foods might have influenced the changes. For recent migrants (< ten years living in US) consumption of meat, fish, poultry, milk, butter and sweets were equally either increased or remained, while the consumption of ghee and Indian savouries either decreased or remained (RAJ, GANGANNA AND BOWERING 1999).

In his research on changes in the food habits of Asian Indians in the United States, GUPTA (1975) also found a relation between dietary changes and the length of time since the migrants lived in the United States. Asian Indians staying in US for 4 to 15 years were quite familiar with the host countries cuisine and consumed beef and non-vegetarian food on a regular base, while recent migrants (living in United States one to three years) primarily consumed American fast food. His results showed that a majority of participants (60%) changed their eating habits from a vegetarian diet to a non-vegetarian one in a time frame from two to seven years. American foods were preferred for breakfast and lunch and 80% of the participants preferred a typical Indian

dinner. Half of the participants started consuming alcoholic beverages (GUPTA 1975).

These results are in contrary to the outcomes of JONNALAGADDA AND DWAN'S (2002) investigation on the "Nutrient intake of first generation Gujarati Asian Indian immigrants in the US". 61% of their participants stated to be vegetarians and all of them maintained eating vegetarian food only despite living in United States 18 to 21 years already. However when comparing these two studies, it has to be remarked that they were conducted with a time gap of 27 years. During this time, the range of vegetarian food and especially ethnic Indian food available in the United States might have increased due to an increased number of Indian migrants in the United States. Hence, the migrants are not any more forced to change their diet due to unavailability. The two studies also show that dietary acculturation might get affected by ethnicity as GUPTA's (1975) study included Indians from all over India while JONNALAGADDA AND DWAN's (2002) investigation concentrated on Gujarati Asian Indian immigrants. JONNALAGADDA (2002) confirmed in another study variations in participants dietary intake depending on their region of origin. The results of this study also showed a higher BMI for participants from regions of North India.

In their qualitative research CHAPMAN, RISTOVSKI-SLJEPCEVIC AND BEAGAN (2011) studied the meanings of food, eating and health in Punjabi families living in Vancouver, Canada. They found a difference in eating patterns of elderly migrants who maintained traditional food and younger migrants who were more likely to eat some Western food. Participants reported two different understandings about the effect of food habits to physical health. From the scientific point of view, they related specific food components (e.g. fat, vitamins) to the risk of disease and the traditional approach included traditional knowledge on food. Participants stated that food choice was influenced by food preferences of family members (CHAPMAN, RISTOVSKI-SLJEPCEVIC AND BEAGAN 2011).

KALRA ET AL. (2004) studied "Knowledge and practice: the risk of cardiovascular disease among Asian Indians. Results from focus groups conducted in Asian Indian communities in Northern California." Results were classified into different themes. For the present study, the results for the theme "Health and cultural concerns regarding diet" are mostly relevant. Participants remarked a relation between diet and cardiovascular disease. The serving of food was seen as a nurturing act mostly provided from the mother or wife to the other family members. Senior women in the families influenced the decision-making process concerning diet modifications. This was reported as a challenging process,

often frustrating for younger women. Participants were very concerned about the use of oil. Cultural values encourage them to consume traditional foods, which are often very oily. They criticised the lack of control and choice of food at community functions and the social pressure to eat and prepare heavy, fattening foods at gatherings. Dietary modifications were made to different degrees. Some participants' added healthier food, others reduced unhealthy ingredients and some developed a comprehensive approach to healthier eating (KALRA ET AL. 2004).

Looking into the relationship of diet and religion BHARMAL ET AL. (2013) reported in their research on "The Association of religiosity with overweight/obese body mass index among Asian Indian immigrants in California" that Hindus and Sikh who were highly religious were more likely to be overweight. Highly religious migrants were mostly older, female, less educated and less acculturated. There was no relationship for Muslims and being overweight. The researchers assume a reason for this result may be the consumption of food and drinks on religious gatherings as well as a welcoming environment provided by religious organisations for overweight individuals. Furthermore, they presume that there was no link between religiosity and weight status for Muslims because there were fewer Muslims included in the study and due to different religious practices in the religions concerning diet (BHARMAL ET AL. 2013).

MAHADEVAN (2003) examined changes in food habits of South Indian Hindu Brahmin immigrants in State College. By using the grounded theory approach, she did a comprehensive research to understand '*the 'how' of dietary acculturation*' and to explore the contextual factors affecting the process. The results of her study showed that participants decreased their consumption of ghee, yoghurt, dhal, tea, roti and rice, while they increased the consumption of bread, soda, pizza, cookies, ready-to-eat cereals and pasta. Traditional Indian breakfast items like dosa or idli were replaced with ready-made cereals. Participants reported eating more irregularly since living in the United States and their meal patterns changed from 3-4 meals a day (breakfast, lunch, 'tiffin', and dinner) in India to 1-2 meals a day (lunch or snack, and dinner) in the United States. Eating out became more regular in the United States. They stated that eating out was a "*luxury*" in India and it became a "*compulsion*" for them in the United States. Mostly they ate out for lunch in restaurants as well as in fast food places. Furthermore, results indicated that younger, single or male migrants seemed to consume less traditional foods. Males stated they eat less traditional foods, which is caused by their deficient skills to cook traditional meals. Most participants identified themselves as Hindu Brahmins by birth, but follow the Brahmin way of eating because their parents and grandparents did so

and not due to their religious beliefs. They struggled with keeping their vegetarian diet mostly because food that was labelled as “vegetarian” in United States was not always completely meatless. In addition, the unavailability of Indian vegetables forced them to change their eating habits. Working women stated that they broke the traditions to cook every meal fresh like their parents’ generation did back in India, where leftovers were not eaten due to hygiene reasons. However, the housewives continued cooking Indian meals daily. All female participants reported that they gave up the Brahmin traditions not to cook during menstruation, because it was impractical without other women available who could do the cooking instead of them. Participants’ classified foods such as sandwiches, pizzas, hamburgers, etc. as snacks rather than proper meals and stated that they do not find them filling (MAHADEVAN 2003).

MEHROTRA (2004) also included questions about food in her study of Asian Indian immigrants. Participants stated they miss Indian food and were glad to have an increasing number of South Asian grocery shops in the United States. Cooking was primarily women’s responsibility, no matter if they were working outside the home or not. Some women stated missing Indian ceremonies but did not miss the additional housework associated with these occasions. In addition, some women were thankful that their family were pleased even if they just cook a light meal from time to time or other than Indian food. They explained that this would not have been possible back in India, where every meal had to be Indian, especially when living in a joint family (MEHROTRA 2004).

4. MIGRATION AND MIGRANTS – A DEFINITION

There is no consensus on official definitions of the terms “migrant” and “migration”. Accordingly, different definitions of who is a “migrant” have significant consequences in terms of numbers of migrants in a country and for studying the impacts of migration. The most commonly used definition is the following:

“Persons who live temporarily or permanently in a country of which they are not nationals. As the term ‘migrant’ refers to cases where the decision to migrate has been taken freely by the individual concerned, i.e. without the intervention of external compelling factors, migrants are differentiated from refugees and asylum seekers.” UNESCO (2003:25)

Furthermore the UN defined a “long-term international migrant” as

“A person who moves to a country other than that of his or her usual residence for a period at least a year (...) so that the country of destination effectively becomes his or her new country of usual residence.” (UNITED NATIONS 1998:18)

However, the minimum length of stay in the foreign country to be called a “migrant” is diverse from country to country. Therefore, the UN can only estimate the worldwide number of migrants, which was 232 million international migrants in 2013. This means that 3.2% of the 7.2 billion people living worldwide stay outside their country of birth (UNITED NATIONS 2014).

Migration can be categorized by different aspects e.g. by the motives for migration, the social class and education of migrants, the duration of relocation or by legal status (BHUGRA AND BECKER 2005). Based on the UNESCO (2014), a common categorization is the following:

- temporary labour migrants – migrating for a limited time period for working
- highly skilled and business migrants – migrants with high qualifications
- irregular migrants – entering a country illegal
- forced migrants – forced to move due to external factors
- family members – joining family members who have migrated for one of the above reasons
- return migrants – returning back to their country

Based on the UNESCO categorization, migrants in this study were highly skilled and came to Singapore for work or as family members, joining their partner who moved to Singapore for work.

Migration is a process, which happens in three major stages. During the pre-migration stage (1), people decide to migrate and carry out preparations. The physical relocation happens in the second stage (2) when people move to the host country. While in the post-migration stage (3), migrants start to “absorb” the cultural and social settings within the host country. In the third stage, there might be a process, in which migrants experience the cultural and social rules of the host country. At the same time, they may take on new roles in the host society. During this time, migrants undergo the main part of their acculturation process (BHUGRA AND BECKER 2005).

5. INDIA – POPULATION, CULTURE AND FOOD WITH A FOCUS ON SOUTH INDIA

With approximately 1.2 billion inhabitants, India is the second-most populous country in the world (GOVERNMENT OF INDIA, MINISTRY OF HOME AFFAIRS 2011).

The 28 states and seven union territories of India bear a high cultural diversity including a wide variety of cuisines. As Dubey described:

“In India the tastes of people changes after every two miles like their language and culture (...)” (Dubey 2011:3).

In order to investigate the dietary acculturation of Indian migrants, it is important to understand and study the culture and especially the eating culture in their home country. Therefore, this chapter will provide an overview on India's culture and chapter II 5.1 provides significant information in relation to Research Question 3 (RQ3). Some of the main features of the traditional Indian diet will be described in chapter II 5.2 in order to identify dietary changes after migration, which are important to answer Research Question 1 (RQ1). Chapter II 5.3 focuses on cultural influences on the Indians eating behaviour as food and culture are strongly related in India. The role of women in the Indian cuisine is still very traditional and specific. Therefore, it will be described with more detailed in chapter II 5.4. Participants in this study are mainly from South India. Hence, the focus is set on South Indian culture and cuisine whenever it was possible to identify specific information within literature.

5.1. People and culture of South India

South India incorporates the four states Tamil Nadu, Kerala, Karnataka and Andhra Pradesh as shown in Figure 4. The union territories of Lakshadweep and Puducherry belong to South India as well, but are not in focus of this study due to their small size.



Figure 4: Map of South India (source: MAPS OF INDIA 2012²)

² <http://www.mapsofindia.com/maps/south/india-south-zone-map.jpg>

Table 2 shows some population information of the South Indian states compared to the whole of India. This information allows a rough comparison between the states.

Table 2: Population information on four South Indian states (source: modified from GOVERNMENT OF INDIA, MINISTRY OF HOME AFFAIRS 2011; SURYANARAYANA, AGRAWAL AND PRABHU 2011)

	Andhra Pradesh	Karnataka	Kerala	Tamil Nadu	INDIA
Literacy rate (%) 2011	67%	75%	94%	80%	73%
Mean years of schooling (years) 2004/2005	3,06	3,95	6,19	4,79	4,10
Life expectancy at birth (years) 2002-2006	64.4	65.3	74.0	66.2	63.5
PPP Income per capita (PPP 2008 \$)	3398.76	3269.76	5262.89	3835.05	3337.33

Life expectancy is higher in all four South Indian states compared to the whole of India. Although, the average annual revenue is higher in South India compared to entire India, except for Karnataka. Andhra Pradesh is the only state having a literacy rate lower than the overall rate for India. Mean years of schooling are the lowest in Andhra Pradesh and Karnataka.

The states of South India are culturally diverse. Therefore, this chapter describes major characteristics of the four South Indians states focusing on population, religion, language and food.

Tamil Nadu: Around 72 Million people live in the state (CENSUS OF INDIA 2001) with a population density of 555 persons per square kilometre. It is called the “heartland of Dravidian culture”. Even though the capital Chennai was one of the centres of British rule, the British had low influence to the Tamilian culture and cuisine (SEN 2004). The predominant spoken language is Tamil. Tamil Nadu is very rich with traditional literature, music and Kerala dance. The main religion is Hinduism with 89% of Tamilians practicing Hinduism. Tamil Nadu is one of the most industrialized states in India. However, agriculture is still the main income source with 45% of the area cultivated by rice, millet and several cereals, pulses, vegetables and fruits. The mountain area is farmed by coffee and tea plantations.

Kerala: Around 33 Million people live in the state (CENSUS OF INDIA 2001) with a population density of 860 persons per square kilometre. The predominant spoken language is Malayalam. Kerala has, with 56.2%, a relatively small number of Hindus compared to the other states of India. While 24.7% of the state’s population are Muslims, 19% of Malayali are Christians. It has the

largest concentration of Christians in India; consequently, Kerala has the lowest number of vegetarians in the country. The state is well known for its spices. The main income source is agriculture; 86% of the area is cultivated for pepper, rubber, coconut, tea, coffee, cashew nuts and a high diversity on spices, fruits and vegetables.

Karnataka: Around 61 Million people live in the state (CENSUS OF INDIA 2001) with a population density of 319 persons per square kilometre. The predominant spoken language is Kannada. 84% of Karnataka's population believe in Hinduism. Bangalore is the state's capital and the second - fastest growing city in India with a booming IT industry. However, the main income source is still agriculture with cultivating rice, coffee, ragi, lentils and sugar cane. The state holds 60% of the Indian coffee production.

Andhra Pradesh: Around 85 Million people live in the state (CENSUS OF INDIA 2001) with a population density of 308 persons per square kilometre. The predominant spoken language is Telugu. The main religion is Hinduism with 89% of Telugus believing in Hinduism. 62% of the population lives on agriculture.

5.2. Eating behaviour in India

This chapter describes the eating behaviour of the Indian population by focusing on the aspects of grocery shopping, meal components, meal patterns and eating out.

Grocery shopping

India has the highest production of fruits and vegetables worldwide. Major productions are in cauliflower, brinjal, onion, cabbage in potato, major fruits are mango, banana, papaya and lime. Most of these products are sold at traditional food markets (GANDHI AND NAMBOODIRI 2004).

"Organized food retailing is a relatively new phenomenon in India, with small Western-style supermarkets only starting to appear since the 1990s. Traditional local markets and small-scale retailing continue to dominate India's food retail sector." (NISA 2008:1)

In general, in India it can be differentiated between shopping for fresh farm and animal products and other food and groceries. SINHA, MATHEW AND KANSAL (2005) identified in their study on "Format Choice of Food and Grocery Retailers" five different types of stores for buying groceries in India: Kirana Stores, upgraded Kirana Stores, Supermarkets, Hypermarkets and

Wholesalers. The Kirana Stores are small, usually family-owned grocery shops with a focus on selling grains, pulses, other groceries and personal products. Upgraded Kirana Stores offer self-service instead of over-the-counter selling. Kirana stores are still the preferred places for grocery shopping especially in rural areas. However, the number of Hypermarkets opening in India is increasing (RAJ AND BHARTI 2011).

The conclusion of GOSWAMI AND MISHRA (2009:127) that Kiranas are well-located, but lack of cleanliness, variety, quality and “*helpful trustworthy salespeople*” might be one reason for the growth of Western type markets like convenience stores, departmental stores, supermarkets, specialty stores and hypermarkets. Other influences to this change can be found in the high number of young population, a rapidly expanding middle class, increasing income levels, growing literacy, increasing number of working women and nuclear family structures which all together lead to fast changing trends in food and eating habits of consumers (PRASAD AND REDDY 2007).

Also fresh or minimal processed foods are still the first choice of Indian consumers (MORISSET AND KUMAR 2008), the rising number of supermarkets but also the changes in Indian lifestyle and higher incomes result in an increasing consumption of packed food. In the study of VEMULA ET AL. (2013) 45% of participants reported buying pre-packaged food once per week. Around 20% stated buying these foods every day. It has to be admitted, that 99% of participants in this study were educated. The study of KUMAR AND BISHNOI (2011) confirmed, that packed food is preferred by participants with a good academic background.

Meal components

Common South Indian meal components are described as following, using KOCTÜRK’s (1995) Food Patterning Model as a framework. Literature did not provide separate data for each South Indian state. Hence, the information is valid for entire India or all states of South India.

Staple

Rice: is the staple food in South India (MISRA 2011). With a consumption of 208 gram per day per capita, it is the major source of carbohydrates for Indians in general (KENNEDY, BURLINGAME AND NGUYEN 2002). It can be prepared into diverse forms. Rice flour is ground in a mill and is used to prepare common breakfast items like idli or dosa. It can also be used as a thickener for curries. Snacks are often prepared with puffed rice and used as sacred offering in Indian

wedding ceremonies. This is one of the diverse examples for the symbolic meaning of rice in the Indian culture. Flaked rice is used to prepare sweet or savoury dishes (SANMUGAM 2001).

Complementary

Vegetables: dominate the vegetarian cooking, with a variety of more than 200 vegetables used in the Indian cuisine. The type of vegetable and the style of preparing vary depending on local customs (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012:380-382). Traditional South Indian dishes including vegetables are sambar, rasam and curries. Common vegetables used in the South Indian cuisine are okra, cauliflower, cabbage, brinjal, pea, gourds, beans, tapioca, tomatoes, onions and lemon (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). Vegetables are usually stir-fried or sautéed and mostly served wet (DUBEY 2011; MISRA 2011). Another common preparation for vegetables are pickles and chutneys.

Pulses: are the major protein source in India especially for Indians with low income (RAMACHANDRAN 2010). As shown in Figure 5, the consumption of pulses increased in rural India and decreased in urban India. However, Indians in urban areas still consume more pulses. There is a huge variety of different pulses used in Indian cuisine. Pulses like beans, peas and lentils are used either in curries or fried or ground to prepare snacks and sweets. SANMUGAM (2001:25) stated: *“There is never an Indian festival without pulses (...).”*

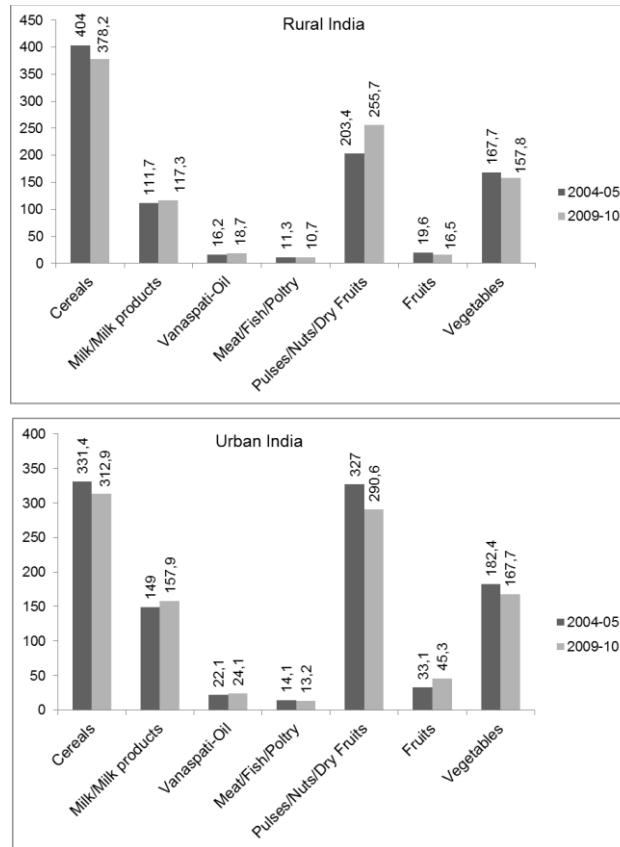


Figure 5: Per capita consumption of diverse food groups in rural and urban India in 2004/05 and 2009/10 shown in gram per day. (source: modified from GAIHA ET AL. 2012)

Meat, fish, poultry, egg: this food group is of minor importance in the Indian diet and slightly decreased in urban as well as in rural areas (GAIHA ET AL. 2012). Hence, their contribution to the protein supply in Indians population is mean with an average of 4% in rural and 5.5% in urban areas. An exception is Kerala where the consumption of these foods is significantly higher compared to other states (NATIONAL SAMPLE SURVEY ORGANISATION 2007). Seafood is popular among coastal regions while chicken, lamb and mutton are the preferred types of meat (MISRA 2011). In South India, meat is mostly included with curries. Vegetarianism varies between the genders and states. In entire India, more women (33%) than men (24%) tend to be vegetarian. In South India, Karnataka has, with 20 to 49%, the highest rate of vegetarian women between 15 and 49 years. While the rate of vegetarian women between 15 and 49 years is less than 10% in the states of Kerala, Andhra Pradesh and Tamil Nadu (ARNOLD ET AL. 2009).

Milk, milk products: yoghurt takes an important role in the Indian cuisine. It is either in its natural form, cooked in a dish or as part of a salad. Within a dish, it can be a souring agent, a tenderizer or a thickener. The leftovers of yoghurt are

commonly used to prepare yoghurt rice, a yoghurt based drink called moru, to marinate meat or as part of a curry (SANMUGAM 2001). Especially in urban areas the consumption of cheese increased, which might be mainly based on the higher willingness of consumers to buy ready-made paneer and on the greater international exposure, rising incomes and brand affiliation (JAYADEVAN 2013). Ghee is commonly served with rice as flavour enhancer (MISRA 2011) but contains also cultural meanings (MAHADEVAN 2003; SESHADRI 2007).

Accessory

Fat sources: traditionally used oils are groundnut oil, mustard oil, vanaspati and coconut oil. While more recently the use of sunflower oil, soybean oil, other vegetable oil and rice bran oil increased (RAMACHANDRAN 2010). There is an increased consumption of vanaspati oil in entire India (GAIHA ET AL. 2012). Ghee is listed under milk products.

Herbs and spices: fulfil diverse duties and meanings in the Indian cuisine. They serve as an aphrodisiac, have curative properties, preserve food, improve appearance in giving colour to the dishes, aid digestion and are used as a thickening agent (DUBEY 2011). Commonly used spices are cinnamon, turmeric, cardamom, asafoetida, bay leaves, fenugreek, fennel, cumin, coriander, saffron, anis, peppercorn and mustard seeds (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; MISRA 2011; SANMUGAM 2001). Spices and herbs are usually mixed into masalas which might be dried, powdered or wet (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). Each significant dish has its distinctive masala e.g. sambar masala, rasam masala and so on (SESHADRI 2007). Furthermore, each Indian family has its personal masala recipes, which are passed from generation to generation. Masalas are mostly handmade.

Sweets, desserts, snacks: sweets are of major importance as festival foods and for functions. Typical South Indian sweets are payasam, sweet pongal, kheer, burfi, halwa or kulfi, which is Indian icecream. Preparations are characteristic for each region or even for each family in South India. Snacks are very popular in India and in urban areas snacks are available in small shops or from street vendors. In villages, they are mostly prepared at home (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). Murukku and vadai are common snacks (SANMUGAM 2001). Other snacks are pancakes or seasoned fried dough made from lentils or wheat (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012).

Nuts and seeds: commonly used nuts include ground or whole almonds, cashew nuts and sesame seeds. They are used as flavouring as well as for thickening (SANMUGAM 2001).

Fruits: are mostly consumed fresh or as juices. Another way is to prepare them as chutneys (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; MISRA 2011). Seasonal fruits are mango, citrus, grapes, pineapple, guava and litchi, while banana, papaya, water melon and coconut are available all year round (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). The consumption of fruits is significantly higher in urban areas (GAIHA ET AL. 2012).

Drinks: “milky” coffee is the preferred hot beverage in South India, while water is served with the meals (MISRA 2011). Running water in the house is in many parts of South India still not a self-evident source (GOVERNMENT OF INDIA, MINISTRY OF HOME AFFAIRS 2011).

Meal pattern

Meal patterns are diverse through South India. Traditional meal patterns are explained as follows. However, they might have adapted especially in urban areas due to working hours for family members. Traditionally Indians start a day in the morning with a cup of tea or coffee made with milk and sugar. The full breakfast, which is the main meal of the day in South India, is consumed between 9 and 11am. For breakfast idli or dosa are typically served with sambar, rasam, vada, dhal and/or chutney. Around 4 to 5 pm a snack or late lunch is eaten. It might include leftovers from the breakfast. Dinner is around 7 to 9 pm (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). Lunch and dinner follow diverse set patterns in the four states. In Kerala, the meal starts with rice and plain yoghurt or yoghurt salad, followed by a sambar. The third part would be a vegetable dish and the meal would end with yoghurt or sometimes a dessert. Preferred side dishes are papadums and pickles. In Andhra Pradesh, a typical meal starts with rice and two vegetables, one fried and one in gravy, followed by a thick plain or vegetable dhal and a pullusu. The meal ends with rice mixed with yoghurt. Preferred side dishes are pickles and chutney. In Tamil Nadu a meal starts with rice, sambar and a seasonal vegetable dish. It is followed by rice with rasam, dhal and vegetables and will end with plain flavoured buttermilk or yoghurt. If guests are there, sweets might be served in-between the last two dishes (SEN 2004). These patterns may vary between different regions and families.

Indians differentiate clearly between a meal and a snack. There are no foods, which can be considered as both. Diverse Indian languages have different verbs for eating a meal or a snack. In South India, traditionally the term “tiffin” is describing a snack, mostly including foods made of grains, legumes, sugar and

salt and hot drinks like coffee. Tiffin is served between noon and evening meals or for visitors. While tiffin can be more comprehensive than a meal, it differs from a meal by the preparation method of the staple. Broken or fermented rice, rice flakes or rice flour are used to prepare a tiffin, while a meal is considered to include boiled rice served with at least one side dish (KATONE-APTE 1975).

The traditional Indian serving plate is a thali, which is a tray, made out of metal. All meal components like rice, bread, chutney, pickles and vegetables are served on the thali. For liquid dishes and yogurt, Indians use small metal bowls, called kathoris. Before this, the traditional South Indian serving plate was a banana leaf, which is still used by some families.

Eating out

For the relevant age group in this study meals eaten outside home are shown in Table 3.

Table 3: Number of meals eaten outside in 30 days for two age groups in rural and urban India in 2004/05 (source: modified from NATIONAL SAMPLE SURVEY ORGANISATION 2007:40)

	Urban				Rural			
	Meals eaten outside		Total number of meals eaten in 30 days		Meals eaten outside		Total number of meals eaten in 30 days	
age	female	male	female	male	female	male	female	male
15-29	1.96	3.87	69.04	68.72	1,87	1,91	72.01	71.96
30-44	1,24	3,0	67.88	67.65	0,88	1,87	70.55	70.77

Meals eaten outside the home included free meals as well as paid meals consumed in schools, in other households during ceremonial or other occasions or otherwise in hotels, restaurants, eating-houses or from factory canteens (ARNOLD ETAL. 2009).

Eating out is getting more popular especially in Indian cities (GAIHA ETAL. 2012). Small roadside stalls offering traditional Indian snacks are present as well as Western fast food restaurants. Major brands among Western fast food providers are McDonalds, KFC and Subway. To cater to local tastes, Western fast food outlets started to adapt on the local Indian market. In 2013, the first vegetarian McDonald's has opened in India (EUROMONITOR INTERNATIONAL 2013). Studies showed that especially young consumers like to eat fast food for "fun and change". However, they still prefer home food as "first choice" mostly due to its better taste (GOYAL AND SINGH 2007:182).

5.3. Cultural influences on South Indians eating behaviour

Levi-Strauss described in his culinary triangle the relation between the raw, the cooked and the rotten. While the cooked is the cultural transformation of food, the rotten is seen as the natural transformation. Taken in isolation each category is an empty form without any prediction. Only due to ethnographic observation it can be analysed what each of the categories mean for an ethnic group (LEVI-STRAUSS 1966; SCHAHADAT 2012). By considering the way from the raw to cooked food as cultural transformation, this process has been affected by diverse factors within the Indian history.

The major effects are shown in Figure 6. Influences from caste, religion and Ayurveda will be described in the following.

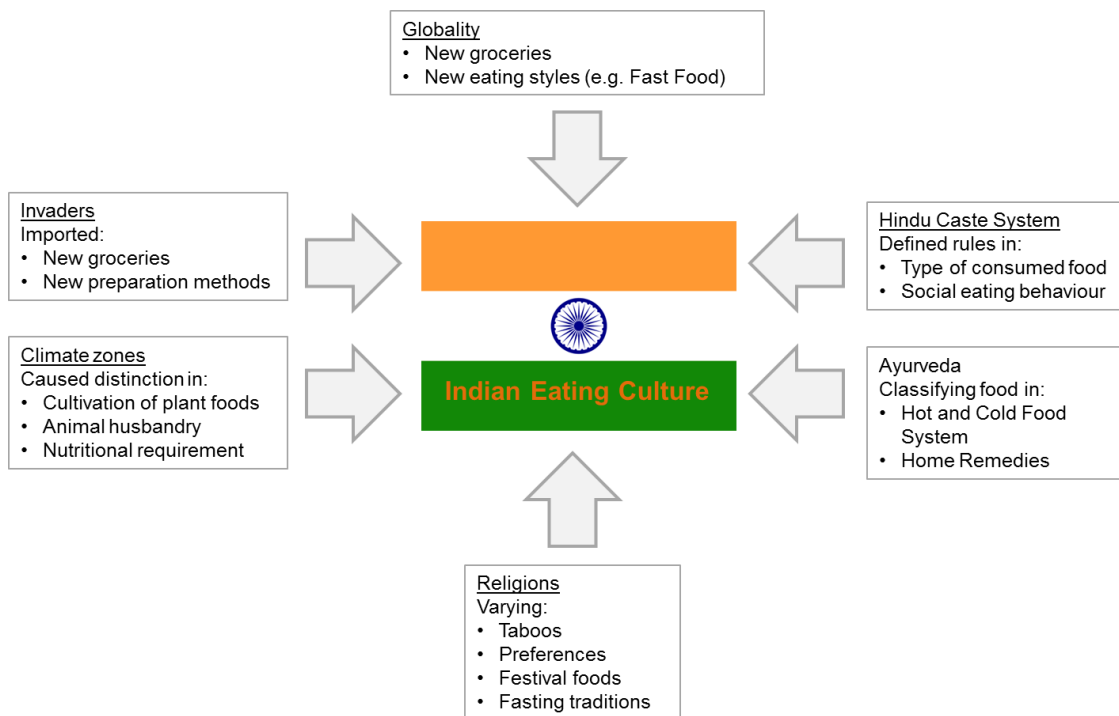


Figure 6: Influences on the Indian eating culture (source: author's own)

5.3.1 Caste, religion and the Indian cuisines

The countries diverse religions remained a significant influence on peoples eating behaviour as every religion holds varying taboos and preferences (WHITE AND KOKOTSAKI 2004). Figure 7 shows the main religions in India. Hinduism is dominating within more than 80% of the population.

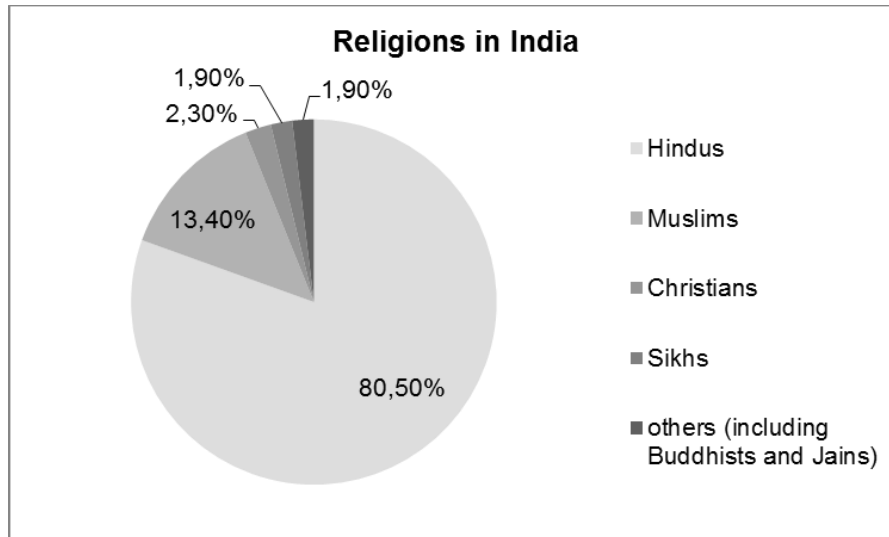


Figure 7: Religions in India (in %) (source: CENSUS OF INDIA 2001)³

There is an unambiguous relationship between Hinduism and eating behaviour. In Hinduism food can be seen as a bearer of collective meanings and furthermore as a cultural-specific symbol. Food symbols guide the believers fundamentally on which foods are allowed to be consumed, how to prepare food, what to eat on certain days of the year like festivals or celebrations and when and how long to fast. Therefore these symbols might be classified into food groups, food preferences, food taboos, food for special diets e.g. pregnancy or weaning, traditional food and festive or ceremonial foods (MAHADEVAN 2003). In Hinduism, food symbols are a significant part of the daily diet at home as well as in public. Each family has its own food meanings based on caste, socioeconomic status, region of origin and worshiped deity.

Examining the context of Hinduism and the Indian cuisine, influences from the Indian caste system have to be included. Different theories exist about the routes of the Indian caste system. There are religious theories, biological theories and socio-historical theories, but none of them has been proven (PRUTHI 2004). However, there is a significant relationship between Hinduism and the Indian caste system as the latter dictates the individuals' role not only in religious daily life, but also in the Indian society. The Indian caste system has composed the social and economic framework for Indian people.

In context of the Indian caste system, food signifies collective association. What an individual eats defines who she/he is, or in other words, to which caste she/he belongs.

³ There is no actual data available, as the Census 2011 did not publish data on religions

The castes are manifested in two institutions: Varna and the Jaati. The Varna, is the “*ancient division of Hindu society*” used in wider social space (KAKAR AND KAKAR 2007:25). They are classified by occupation in descending order as described by RANGASWAMY (2000):

- *Brahmins*: The intellectual and spiritual leaders. They are philosophers, religious leaders, and teachers
- *Kshatriyas*: The protectors of society. They are politicians, police, military, landowners, rulers and warriors
- *Vysyas*: The skilful producers of material things. They are merchants, and commoners
- *Shudras*: The followers or the maintenance people. The so-called menial workers or hard labourers, craftsmen and servants.

The Jaati system includes over 3.000 castes, specifying daily social relations and occupations and is more commonly used in daily life (KAKAR AND KAKAR 2007:25).

Ancient sources used the human body as a symbol to describe the Indian society in relation to the caste system. Therefore, the Brahmin caste represents society's head. The Kshatriya caste forms the arms while the Vysya caste is symbolizing the legs. Finally, the Sudhra caste – servants of the other three – is the feet (MEYER-ROCHOW 2009).

Another group of people are the Dalits. Their low status in society does not consider them as members of the caste system. “Untouchability” has been annulled officially in 1950. Nevertheless the study of SHAH (2006) showed, that it is still part of daily life especially in rural India.

Indians belonging to lower castes are less likely to be a vegetarian, which is confirmed within the National Family Health Survey 2005-2006. The survey examined, that persons living in the slums of big cities are less likely to be vegetarians than persons living in no-slum areas (ARNOLD ET AL. 2009).

People become a cast member from birth on. Each caste has definite rules, which determine activities during their whole life e.g., who the cast members can marry, which education they can undergo and which food they are allowed to eat (KAKAR AND KAKAR 2007:26-28). Furthermore, the caste directs in which manner the food has to be eaten and with whom it is allowed to be eaten (MOLONY 2004:107).

Although a connection between Hinduism and the generation of the Indian caste system is not proven, over the past thousand years some rules within both systems became closely intertwined. Hence, for some eating habits it is hardly possible to determine whether it is based on religion or caste.

Food preferences and taboos

An Indian philosophy states:

“A healthy diet produces a healthy body and a healthy body produces a healthy mind.” (KINGSLAND 2008:74)

Therefore, in Hinduism food is classified in three categories, according to its effects on the human body and mind (KINGSLAND 2008:74):

Sattvic food: is supposed to be “pure” food and is leading to health and spiritual well-being. They are light and easy to digest. This food group includes fruits, vegetables, legumes, cereals and refers to freshly made food.

Tamasic foods: are spicy, fat, hot and bitter. They lead to dulling and include foods like pickles, fried food, meat and fish.

Rajasik foods: “cause heat and stimulation” in the body, like onions or garlic (KINGSLAND 2008:74).

MEYER-ROCHOW (2009:1) explained that food taboos:

“(…) helps that particular group maintain its identity in the face of others, and therefore creates a feeling of ‘belonging.’”

One of the most important taboos in Hinduism, particularly for Brahmins is the consumption of meat, especially beef. For Hindus all living is sacred and being a vegetarian can be seen as a symbol as well as a status. Milk and milk products in form of curd, cottage cheese and ghee take an important part within the Indian cuisine. Fish and eggs are another taboo for most Brahmins, same as alcohol. Hindus, especially Brahmin generally avoid Rajasik foods like garlic, onion and other foods like mushrooms or root vegetables. These foods are considered to produce passions like anger and sex. A special meaning is attributed to ghee. It is supposed to be a sacred food of the deities and is burnt in aarti, a part of puja, in which light from wicks soaked in ghee are offered to gods. Also diverse fresh herbs and spices like Turmeric, ginger, cinnamon and cloves are considered to be sacred and are used in daily cooking (MAHADEVAN 2003). Especially for Brahmin, taboos are not only located in the food items but

also in the preparation. KAKAR AND KAKAR (2007:124) described the kitchen in a Hindu house as

“(…) an extension of the Vedic altar, its sanctity guarded by many taboos, such as not entering it with one’s shoes (of leather) on, or not allowing into it people who’s consciousness is presumed to be in a state of impurity and thus of a lower order.”

Therefore, untill today Brahmin are preferred as cooks. In vegetarian households, meat eaters and people belonging to lower castes, other religions or other cultures are not welcomed in the kitchen (KAKAR AND KAKAR 2007). Regarding the two major types of food preparation – pukka (deep-fried) and katcha (raw, including light fried, boiled and baked) – katcha foods are not acceptable from lower castes, while pukka foods are accepted. Furthermore, food that encountered another person is considered inedible and a cook should not taste the food before serving, to make sure it stays “pure” (KINGSLAND 2008).

Festivals

Hindus celebrate 18 major festivals each year (DUBOIS AND CATT 2002). Food takes a meaningful part in each festival. Therefore, every festival is celebrated with a feast, which includes festival related food items. KITTLER, SUCHER AND NAHIKIAN-NELMS (2012:104) explained, for Hindus

“Feasting is a way of sharing food among the population because the wealthy are responsible for helping the poor celebrate the holiday.”

Important South Indian festivals are Onam, Diwali and Pongal.

Fasting

Fasting is an extensive issue in the Hindu culture influenced by religion, caste, family, gender, age and degree of orthodoxy and varying extremely in frequency and graveness (KATONE-APTE 1975). Fasts can be performed by eating no food for half day, one day or more. It can be done on a particular day to be beneficial for pleasing a Hindu worshiped deity. However, there are also monthly and yearly fasts. Hindus fast for several reasons. Religious reasons are to lessen the believers’ sins or sufferings. There are also astrological reasons for fasting and Hindus may fast as guided by the astrologer. A third reason for fasting is for health benefits as fasting is believed to give the body a rest and to purify both body and mind (KINGSLAND 2008).

Puja and Prasad

As well as for the festivals also within the Puja (worship), food takes a major role. The puja is a non-formal method of prayer. It is performed daily or on special days. Hindus pray before an image of the deity. It can be performed at home in front of a private shrine or in a temple with the help of temple priests and can last five minutes or one hour or more. A complex puja involves a series of ritual stages. It begins with personal purification and invocation of the god, followed by offerings of flowers, food, or other objects such as clothing, accompanied by prayers. Typical foods offered in a puja are cooked rice, fruit, clarified butter, sugar, sweets and milk. The foods offered to the deity are called “Prasad”. Prasad is blessed during the ceremony and is consumed afterwards. Offered food must be vegetarian (meaning no meat, fish and eggs), as gods will not accept food from killed animals. Also onions, garlic and mushrooms are not allowed as Prasad (IP I, line 441-451) as they are supposed to be aphrodisiacs. Prasad should be prepared in a cleaned kitchen and the person who prepares the food should take a bath beforehand and is not allowed to try the food before offering it.

Ceremonies

There are 16 major Samskaras, which accompany a Hindu through her or his life circle. Samskaras are supposed to be the turning points of a Hindu's life. Celebrations are very important ingredients of Samskaras and always include a feast with traditional foods. One major Samskara is the Annaprasana – the first solid food feeding ceremony. It is one example for the deep symbolic meaning of food, especially rice, in the Indian culture. “Anna” means rice, “Prasana” means enter (the mouth). Depending on the region, it will be performed between the child's fourth and twelfth month. After this ceremony, the child can be fed with solid food. Further important Samskaras including feasts are the Vivaha, the wedding ritual and the Antyeshti, the death ceremony.

5.3.2 Indian food in context of Ayurveda

Similar to the Indian caste system Ayurveda is strongly related to Hinduism. The relation emerges already in the term itself. Derived from Sanskrit the term “ayu” means “life” and involves the combination of mind, body, senses and the soul. “Veda” stands for “knowledge” but has at the same time religious overtones as

the term also describes sacred texts in Hinduism.⁴ In history, Ayurveda is linked to Atharvaveda, a Hinduism text collection, describing ancient healing rituals (LESLIE 1998).

Diet has an important meaning in Ayurveda. Food is considered as the main originator for physical as well as for mental health and consequently also for disease (KAKAR AND KAKAR 2007). Hence, for Indian people the meaning behind eating is much more than satisfying their hunger.

The classification of food as sattvic, rajasic and tamasic food is also derived from ayurvedic doctrines and was later related to Hinduism and caste status. Furthermore, the system of Ayurveda classifies food based on different phases of digestion. One is “tongue” taste, called “rasa”, the hot or cool feeling that food causes to the body, called “virya” and “vipak”, which describes the foods action on urine, faeces and sweat. The classifications lead to specific food combinations, recommendations and taboos. As an example, it is recommended that banana and milk is not eaten together as the combination “*decreases the digestive fire*”, this may even lead to colds, allergies and coughs (KAKAR AND KAKAR 2007:121).

Another widely spread tradition in India and part of Ayurveda is the use of home remedies. Even if the Western medicine, “allopathy”, is mostly the first choice of patients to heal severe diseases, home remedies are still used for treating minor affections especially within the group of mothers and children (RAJITH ET AL. 2010; ROUTH AND MANGULKAR 2013). The recipes for home remedies are passed from generation to generation by mouth. With the increasing rate of Indians migrating to other countries and the alteration from the joint to the nuclear family, the descent of recipes for home remedies might decrease over time. Also ROUTH AND MANGULKAR (2013) concluded in their study one of the major reasons for non-usage of indigenous medicinal plants is the lack of access for common man to the old Ayurvedic texts.

5.4. Status of women in context of food and food preparation in the South Indian family and society

KATONE-APTE (1975:316) stated:

“Consuming a meal is a very important event in the daily life of an Indian.”

Moreover, food is not only meaningful for the individual; it has an important position in establishing and structuring social relations in Indian societies.

⁴ The four Vedas are significant holy books in Hinduism, addressing each aspect of a Hindus live which is controlled by faith. It includes daily practices and the yearly calendar.

In the traditional Indian joint family wherein many generations live together, a common kitchen is one of the major features. The oldest woman in the joint family is the decision maker for the daughters-in-law (KINGSLAND 2008). This is especially significant when it comes to duties and responsibilities in the kitchen. Daughters-in-law have to accept and adapt to the eating habits of the new family they married into. Young women in a joint family sometimes hardly feel at home in their mother-in-law's property. In MEHROTRA (2004) study migrated Indian women reported about their time living in a joint family back in India where they had to prepare full meals for lunch and dinner. Their parents-in-law would not accept fast food or snacks and the daughters-in-law spent a lot of time in the kitchen preparing food for the whole family. Hence, moving to another country provides a chance for them to create their own independent households. But the study of KALRA ET AL. (2004) showed that even in Indian diasporas the senior women living in the family influenced the decision making process concerning diet modifications and complicate changes in traditional Indian eating habits for the younger women in the family. Traditionally the women of the family first serve the children and the male members, and then they are able to eat.

During the last decades, the numbers of joint families in India declined. Due to socio-economic changes, the nuclear family becomes the preferred household composition. However, even today women in India are primarily responsible for household duties, also in a nuclear family.

Since the 1970s middle-class women started working for pay and thereby they achieved dual roles: being a housewife and being employed. Tradition continues its hold in the women's mind and the Indian women views domestic and maternal duties as part of their identities (KAKAR AND KAKAR 2007). The role of Indian women is rooted within the Indian patriarchal and collectivistic society including its traditions, religious principles, and practices within families. Women are responsible to hold, teach and transmit cultural traditions, religion, values, and beliefs to their families.

However, the explicit role of women in the household varies with generation, socioeconomic status, the caste system, and the level of education.

6. SINGAPORE – POPULATION, CULTURE AND FOOD

Singapore is a multi-ethnic, multi-religious and multi-lingual country. Based on Singapore's population history, there is no single dominant national identity. Even though the Chinese population has the largest quantity, the government of

Singapore gives equal attention to the three main cultures, which are the Chinese, Malay and Indian culture (HUAT 2003). The influence of the different cultures is apparent in cultural features like language, religion or food as reflected in the number of multi-cuisine restaurants, foreign movies, ethnic stores or religious places of worship.

This chapter will provide information on multiculturalism characteristics in Singapore and the characteristics of food in the country.

6.1. People and culture of Singapore

In June 2012, Singapore had a total population of 5.3 million people and a population density of 7.422 persons per square kilometre (DEPARTMENT OF STATISTICS SINGAPORE 2013b). 3.82 million people were residents, including 0.53 million permanent residents and 3.29 million Singapore citizens. Non-residents formed 1.49 million of the population. The Singapore government differentiates residents between citizens and permanent residents. Both apply to certain requirements. Non-residents include students, work permit holders, foreign domestic workers, dependents and employment pass holders (MINISTRY OF MANPOWER 2014).

6.1.1 Singapore's ethnic groups

From the first days of the country's modern foundation in 1819 by Sir Raffles, Singapore was formed by migrated people predominantly from China, Malaysia and India. Most of them settled for good in the early days. HUAT (2003) described Singapore as a "*settler country*", meaning that the present population of Singapore are all descendants from migrants. As presented in Table 4, the Singapore population is culturally plural; it is a diverse society, wherein people of many different cultural backgrounds live together.

Table 4: Singaporean population by ethnic groups (source: modified from WONG 2011)

Ethnic group (in %)	Year						
	1970	1980	1990	2000	2010	2011	2012
Chinese	77.0	78.3	77.8	76.8	74.1	74.1	74.2
Malays	14.8	14.4	14.0	13.9	13.4	13.4	13.3
Indians	7.0	6.3	7.1	7.9	9.2	9.2	9.2
Others	1.2	1.0	1.1	1.4	3.3	3.3	3.3

In 1970, Singapore conducted its first Census of Population after independence. There is no reliable data available on the population's ethnic groups before this time. Table 4 shows a decrease in the Chinese and Malay population within the last 42 years, while the Indian population increased.

In the first half of the last century, many migrants became Singapore citizens. After this period, the number of migrants started to grow. The percentage of migrants living in Singapore has grown from 21.1% in 1990 to 40.7% in 2010. This includes also the permanent residents. As shown in Figure 8, in 2010 Singapore placed sixth worldwide among the countries with the highest proportion of international migrants among those with at least one million inhabitants (UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS. POPULATION DIVISION 2011). In 2013, the Singapore government released a Population White Paper entitled "*A Sustainable Population for a Dynamic Singapore*". The Paper advocates for further increases in the number of foreign workers.

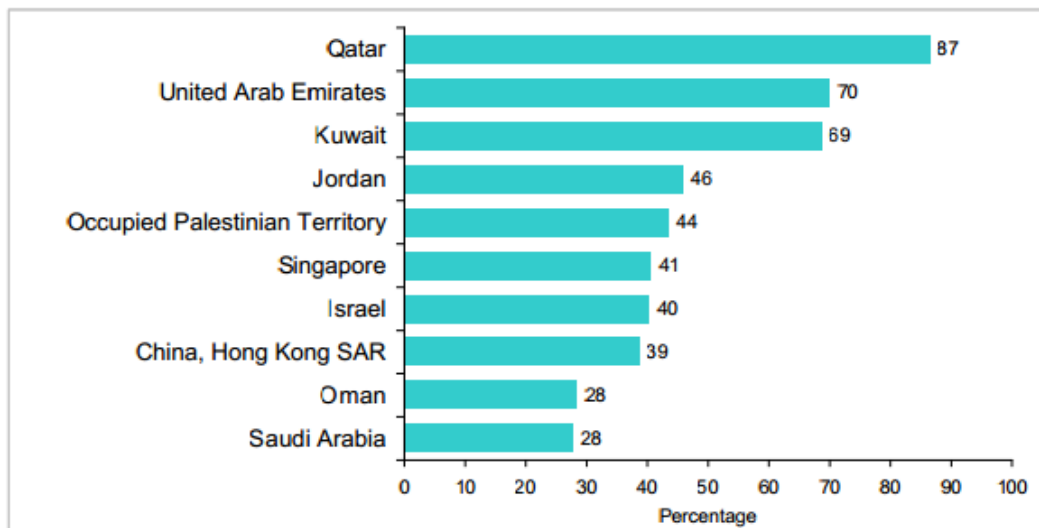


Figure 8: Countries or areas with the highest proportion of international migrants in 2010 among those with at least one million inhabitants. (source: UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS. POPULATION DIVISION 2011:3)

Considering the size of the island state of Singapore, which is around 716 sq. km, it is one of the most densely populated countries in the world. Therefore to establish and maintain a high level of social and cultural harmony (HUAT AND RAJAH 2001), stringent rules were defined by the government which regulate living together in everyday life. Within the "CMIO Scheme" (Chinese, Malay, India, Others) the government regulates equal treatment for the three major ethnic groups (HUAT 2003). The race of a Singaporean is registered on the birth certificate and national identification card (VASU 2012) and can be changed twice in a lifetime (THE IMMIGRATION AND CHECKPOINT AUTHORITY 2011).

6.1.2 Multiculturalism in daily life

Figure 9 demonstrates how important multiculturalism is in Singapore's daily life. Two signs promote the National Day of Singapore show people from each of the three major races of the country. The sign on the right shows information in the MRT. Official information is always written in four languages, namely English, Bahasa Malay, Mandarin and Tamil.



Figure 9: Advert in the streets of Choa Chu Kang and multilingual information in MRT
(source: author's own)

In the following, some aspects from daily life are considered to demonstrate multiculturalism in Singapore.

Housing

Based on its multicultural composition the Singaporean government always endeavoured to create peaceful coexistence with equal rights for every ethnic group. One feature of this effort is the “Ethnic Integration Policy of the Housing and Development Board (HDB)”. In this policy, a representative quota of homes in a housing block is set for each of the three ethnic groups. Once that quota has been achieved for one ethnic group, the policy allows no further sale of HDB flats to that group (HOUSING AND DEVELOPMENT BOARD 2013a). Thereby the government prevents the forming of ethnic enclaves. More than 80% of Singapore's population is living in an HDB flat (HOUSING AND DEVELOPMENT BOARD 2013b).

Languages

Bahasa Malay is the National Language of Singapore. However, the country has four official languages, which are English, Mandarin, Bahasa Malay and

Tamil. Additionally different dialects of each language are spoken within the country. The diversity of languages had an influence on the English based creole, known as “Singlish”, which also includes words from Malay, Chinese and Indian languages and dialects (DETERDING 2007). Official signs as well as announcements in public transport or on public events are predominantly quadrilingual within the entire country (Figure 9).

Singapore introduced a bilingual education policy in 1966. English is promoted as the first language. This should ensure that Singapore is competitive in the global economy. Learning the mother tongue language is also encouraged and is supposed to maintain and support children’s learning about their cultural heritage (VASU 2012). Every student has to learn his or her mother tongue, which is Mandarin for Chinese children, Bahasa for Malay children and one of the different Indian languages like Bengali, Gujarati, Hindi, Tamil, Punjabi or Urdu for Indian children (HUAT 2003; VASU 2012). Hence, 70.5% of Singaporeans are literate in two or more languages (WONG 2011).

Religion

Different religions are present in the country as shown in Figure 10.

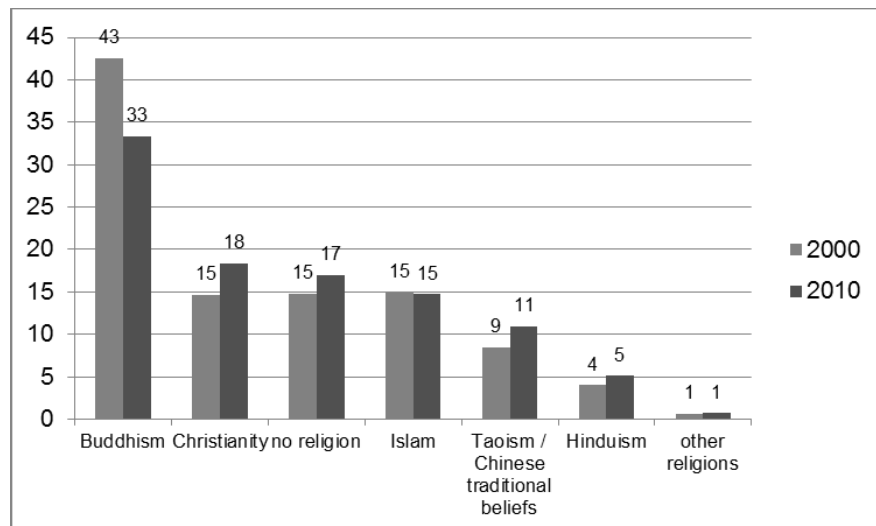


Figure 10: Religions in Singapore (in %) (source: modified from WONG 2011)

Temples, churches, mosques and shrines coexist. Some places represent different religions, like the Loyang Tua Pek Kong Temple and the Hock Huat Keng Temple / Veeramuthu Muneeswarar temple. Both merge Taoism and Hinduism under the same roof (SINHA 2009). Every ethnic group in Singapore has its own festivals. The most meaningful festivals out of the four major religions existing in Singapore are celebrated as a public holiday each year: two

days of Chinese New Year, two Christian holidays, two Islamic holidays and two Indian related religious holidays (HUAT 2003).

The Singapore government always aspired religious equality, harmony and freedom (MANI 1993) and supports the “inter racial and religious confidence circle” (IRCC), a platform for racial and religious group leaders “*formed to promote racial and religious harmony.*” (INTER RACIAL AND RELIGIOUS CONFIDENCE CIRCLE 2014:1)

Although the Singaporean government endeavours freedom of faith, laws and policies restricted this right to a certain point by censoring publications and public discussions of religious issues, along with negative or inflammatory portrayals of religion (BUREAU OF DEMOCRACY, HUMAN RIGHTS, AND LABOR 2010).

Education

Schools are supposed to be a neutral place for all ethnic groups. Schoolchildren are required to wear neutral school uniforms. Religion related clothes like headscarves are not to be worn in school.

Each year Singapore's schools celebrate the “Racial Harmony Day”. For the celebrations, students are supposed to be dressed in their traditional clothes. Traditional dances and food are part of the function (VASU 2012).

6.2. The Indian culture in Singapore

In order to understand the acculturation and dietary acculturation process of Indian migrants, it is essential to explore the history and culture of the Indian migrant population in Singapore. It is also necessary to have an awareness of the religion, language, food practices and social status that exist within this immigrant population. Therefore, this chapter provides an overview of the Indian culture in Singapore including history, religion, language and education.

In 1821, two years after the country's foundation, Indians formed 2.8% of Singapore's population; in 2012, Indians made 9.2 % of the population. The first Indian settlers were Indian convicts from Sumatra and mainland India who later mainly worked in Singapore's Public Works Department. Recently the number of Indians⁵ in Singapore holding a university degree increased from 16.5% in 2000 to 35% in 2010. Indians in Business & Administration, followed by Engineering Science and Information Technology, held most degrees. As

⁵ In The Singapore Census of population 2010, the term „Indian“ refers to persons of Indian, Bangladeshi, Pakistani or Sri Lankan origin

reported in the census of population 2010, Indians have the highest literacy rate with 98.1% (for people 15 years and older) compared to Chinese and Malay habitants (WONG 2011). Indians also play an important role in Singapore's government and they have represented two out of six Presidents of Singapore. However, the Ministry of Overseas Indian affairs described "*a wide gap between the two classes of Indians*". There is one class of highly successful Indians in politics, business and in the professions and another group, which forms the underbelly of Singapore's society (MINISTRY OF OVERSEAS INDIAN AFFAIRS 2013:6).

Due to economical contacts between Singapore and India, 80 % of Indians in Singapore came from South India, with 62% coming from Tamil Nadu (SANDHU 1993). For 41.6% of Indians living in Singapore, English is the home language while Tamil was mainly spoken at home by 36.7% (WONG 2011).

The Indian community in Singapore is a heterogeneous group concerning religion, it consists of 59% Hindus, 22% Muslims, 13% Christians and 5.4% believe in other religions. The number of Hindus living in Singapore increased from 4% in 2000 to 5.1% in 2010 (WONG 2011). There are around 25 Hindu temples in Singapore dedicated to different Hindu deities. However, it is assumed that a predominant number of Hindus in Singapore do not know how to worship in a temple and just follow the actions of other present believers (SINHA 1993).

SINHA (2009) found in her research "The shape of everyday Hindu religiosity in Singapore" phenomena which she described as "*mix and matching*", mainly referred to the relationship between Hinduism and Taoism. She observed Taoist deities in Hindu temples, merged Taoist and Hindu temples, or prayer altars in private Singaporean households housing Hindu deities beside Jesus Christ, Mother Mary and Laughing Buddha. She also found Chinese Taoists joining Hindu rituals. Quite a number of her informants stated that Indian and Chinese gods are the same. There are already a mentionable number of three-generation families as well as nuclear families in Singapore, which are not religiously homogeneous. Her results suggest that for many Singapore Hindus the definition of Hinduism might include practices from other religions (SINHA 2009).

Little India is the "Indian district" of Singapore and a more detailed description of Little India can be found in chapter 5.1

This subchapter described second or third generation Indians, called nonstandard "Singapore Indians" or "local Indians". They mostly have adapted

to the Singaporean culture by eating local food, speaking Singlish and dressing in local Indian fashion. Within this generation, also cross-racial marriages took place producing so-called “Chindian” children. Singapore Indians are likely to be different from Indian migrants from the first generation, who primarily came to Singapore to work, mostly without the intention to stay there for a lifetime.

6.3. Eating behaviour in Singapore

Other than in South India, a typical traditional Singaporean cuisine is difficult to describe due to the multicultural influences. However ANDERSON (2005:189) indicated that cuisine can be defined *„as long as one does not strive for exactness“*. Therefore, this chapter will describe the eating behaviour of Singaporeans without any claim to completeness. To create a comparable base the same headings are chosen for the subchapters as in chapter 5.2.

Grocery shopping

Diverse options are available for grocery shopping in Singapore. General supermarkets like Fair Price, Cold Storage, Giant, Sheng Siong and Jasons Market Place sell products for daily life including a huge range of diverse types of rice, noodles and Asian gravies. Numerous convenience stores are located all over the island. The three market leaders operate 707 stores selling a smaller range of food and drinks compared to the super- and hypermarkets. Fresh fruits, vegetables, meat and fish are available at the local wet markets (KONG 2012). Within the ethnic districts Chinatown, Geylang and Little India, numerous specialized shops offer ethnic food items.

Furthermore online services are available from the main supermarkets as well as for ethnic supermarkets (LENG 2000/2001) and the number of consumers ordering their groceries via internet is increasing.

As a city-state with a high population density natural resources are limited and there is very low agriculture within the country. In 2010, 23% of eggs, 4% of fish and 7% of leafy vegetables consumed in Singapore derived from local farming (AGRI-FOOD & VETERINARY. AUTHORITY OF SINGAPORE 2010). According to the Singapore Food Manufacturing Industry Directory, there are around 750 food manufacturers on the island (SPRING SINGAPORE 2010). However, in total over 90% of the consumed food in Singapore needs to be imported from other countries worldwide. Thus, the high-income and highly developed practice of trade is critical to Singapore’s food security (TENG AND ESCALER 2010). The Singapore government is aware of this problem and in 2009, they launched a

Food Fund with the intention “to strengthen Singapore’s strategies for food diversification and local farming to ensure a resilient supply of food for Singapore.” (AGRI-FOOD & VETERINARY. AUTHORITY OF SINGAPORE 2010:1)

Meal components

Common Singaporean meal components are described as following, using KOCTÜRK’s (1995) Food Patterning Model as framework.

Staple

Rice: is the staple in Singapore, (SINGAPORE NUTRITION AND DIETETICS ASSOCIATION 2013) with a total consumption of 247.731 tonnes in 2012 (TAN 2010). Rice is included as a major part in meals of the three major cuisines. The National Nutrition survey Singapore 2010 showed a daily consumption of 449.7 grams per capita for rice and porridge. Noodles are also a common item in numerous dishes in Singapore, 287.3 g per day per capita noodles and noodle dishes were consumed (HEALTH PROMOTION BOARD 2010).

Complementary

Meat, fish, egg: Table 5 shows that the consumption of almost all meat products has remained constant during the last years. However, the consumption is higher in comparison to the worldwide consumption of chicken, which were 23.7 kg/person/year in 2000. The consumption of beef and pork is significantly lower in Singapore compared to worldwide consumption (pork 42.8 kg/person/year in 2007, beef 18 – 43.2 kg/person/year in 2007) (TENG AND ESCALER 2010).

Table 5: Per capita consumption of diverse food groups in Singapore between 2003 and 2012 shown in kilogram per year (source: AGRI FOOD & VETERINARY. AUTHORITY OF SINGAPORE 2012)

Item	Year 2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Chicken (kg)	33	27	30	27	31	32	31	32	33	33
Pork (kg)	20	21	19	20	21	20	19	20	19	20
Seafood (kg)	27	27	27	26	25	24	24	22	23	22
Fish (kg)	18	17	18	17	16	16	16	15	16	15
Other seafood	9	10	9	9	8	8	7	7	7	7
Vegetables (kg)	96	92	93	93	93	91	91	93	93	94
Leafy	18	19	18	18	17	16	17	16	15	16
Other	78	72	74	76	76	75	74	77	78	78
Hen eggs (pcs)	306	268	286	291	302	302	300	311	307	308
Fruits (kg)	88	87	85	80	74	71	71	68	67	67
Beef (kg)	3	3	4	3	4	4	4	4	4	3
Duck (kg)	4	3	3	3	3	3	3	3	3	3
Mutton (kg)	2	2	2	2	2	2	2	2	2	2

A high number of dishes within all present cuisines in Singapore include meat or fish. At many stalls in hawker centres, it is common to choose rice with a self-determined number of vegetables dishes (mostly one to two) and meat dishes (mostly one to two). Some significant meat and fish dishes in Singapore are chicken rice, fishballsoup, mutton murtabak, beef rendang or fish head curry.

Milk/milk products: with a daily consumption of 271.2 gram per capita, milk and milk products take an important role in the Singaporean diet. Mostly the milk is used in beverages like tea, coffee or a malt drink (HEALTH PROMOTION BOARD 2010).

Vegetables: belong typically to a Singaporean dish. The type of vegetables varies within the diverse cuisines.

Bread and breakfast cereals: as shown in the Nutrition Survey Singapore 2010 this food group takes an important role in the diet of Singaporeans with a daily intake of 171.4 gram per person. Wholemeal bread and wholegrain cereals were mostly eaten within this food group (100.7 gram per day per person) (HEALTH PROMOTION BOARD 2010).

Soy Products: in the form of tofu, soymilk and bean curd are, with a daily consumption of 64.4 gram per person, an appreciable food item in Singapore.

Pulses: take a minor part in the Singaporean dishes, with a daily consumption of 24.4 gram per capita. The Singapore Indian population, who had a daily intake of 43.9 gram per person, predominantly consumes them (HEALTH PROMOTION BOARD 2010).

Accessory

Fat sources: common oils are blended oil and monounsaturated oils. As bread spread butter and soft margarine are widely used. The consumption of monounsaturated oils and butter increased in Singapore between 2004 and 2010 (HEALTH PROMOTION BOARD 2010).

Herbs and spices: stand for the authenticity of the ethnic dishes. Each cuisine has its own significant herbs and spices. While the Chinese cuisine tends more towards the usage of garlic, oyster sauce, soy sauce and sesame oil, Malay foods commonly contain turmeric, galangal, tamarind, shrimp paste, pandan leaves or chili (SINGAPORE NUTRITION AND DIETETICS ASSOCIATION 2013). Significant spices and herbs of the Indian cuisine are already described in chapter 5.2. However, within fusion dishes spices and herbs might be combined and mixed.

Sweets, desserts, snacks: snacking is very common in Singapore and not fixed to certain times. 27.1% of participants in the National Nutrition Survey stated that they eat snacks or sweet desserts more than two times per week. This number does not include the consumption of biscuits, pastries, cakes and titbits (e.g. chocolate, ice-cream, salted snacks etc.). Various kinds of snacks from diverse cuisines are available. Local snacks are kueh kueh, dim sum, Indian rojak or goreng pisang (HEALTH PROMOTION BOARD 2010).

Fruits: are an important part of a Singaporeans diet with a daily intake of 198.6 gram per person, they are consumed fresh or as juice (HEALTH PROMOTION BOARD 2010). The variety is huge with apples, oranges and bananas to melon, jack fruit, mango, papaya, rambutan and Singaporeans favourite fruit, the durian.

Nuts and seeds: are of minor importance in the diet of Singaporeans with a daily consumption of 3.5 gram per person (HEALTH PROMOTION BOARD 2010).

Drinks: coffee and tea are common hot beverages in Singapore along with Milo. In addition, soft drinks, sweetened drinks and fresh juices are usual. Nearly 46% of Singaporeans stated they drink sweet drinks (including soft drinks, fruit drinks, packed drinks etc.) more than once per week (HEALTH PROMOTION BOARD 2010).

In South India, the process of cooking and eating is influenced by factors like the partly limited availability of running water or a working kitchen in or outside the house. Both of these aspects are not of major importance within the process of cooking and eating in Singapore. As a modern and an economically highly developed country, each household is equipped with clean and drinkable running water and a kitchen inside the house.

Meal pattern

In general, Singaporeans consume three meals per day; these are breakfast, lunch and dinner. Sometimes they also eat a late night supper (SINGAPORE NUTRITION AND DIETETICS ASSOCIATION 2013). However, the meal patterns may vary from family to family also depending on the ethnic group. Typical Singaporean breakfast dishes are kaya (a sweet coconut egg jam) toast and coffee with condensed milk or Roti Prata (SINGAPORE NUTRITION AND DIETETICS ASSOCIATION 2013), which are also offered in many local coffee shops (Kopitiam) and hawker centres. As for ingredients, lunch and dinner are similar and usually warm meals. Singaporeans like to snack. Snacks are available in every shopping mall as well as in hawker centres or as street food and in every

form as sweets or hearty and numerous diverse cuisines. There are no fixed snack times; snacks are eaten usually at any time during the day.

Eating habits among Singapore Indians

There are no studies on eating habits of first generation Indian migrants in Singapore. However, eating habits of Indian residents as well as Indian permanent residents are included in the National Nutrition Survey 2010.

Indians showed the highest intake of bread, breakfast cereals (249.4 gram per day per person), vegetable (including pulses) dishes, fruits, milk and dairy products and the lowest intake of eggs, poultry and meat dishes among the three ethnic groups. 30% of the Indian participants stated they do not eat meat at all, while 14.9% said they do not to eat poultry at all. With 379.8 gram per day per person, Singapore Indians had the highest consumption of milk and milk products among the three ethnic groups. They mainly used milk as beverage within tea, coffee or malt drinks. Of all three ethnic groups, Indians had the highest usage of polyunsaturated oils for cooking. Singapore Indians were less likely to eat brown or red rice and they add more sugar to beverages (HEALTH PROMOTION BOARD 2010).

Eating out

The Singapore nutrition survey 2010 investigated the eating habits of Singapore residents, including the habit of eating out. Within the survey, the diet of 1647 male and female of the three major ethnic groups Malay, Chinese and Indian between 18 and 69 years has been examined.

While 54.6% of Chinese participants stated they eat out six times per week or more, 52.9% of Indian participants stated they eat out never or once per week or less. In 2010 in total 60% (compared to 47.8% in 2004) of participants reported they eat out for lunch or dinner at least four times per week in hawker centres, coffee shop stalls, food courts, restaurants and/or coffee houses. A total of 19.6% of Malay participants stated they eat at Western fast food restaurants 2-5 times per week (HEALTH PROMOTION BOARD 2010). The study of WHITTON ET AL. (2013) on "Fast-food consumers in Singapore: demographic profile, diet quality and weight status" showed a higher fast food consumption among young adults as well as high income and middle education level groups (WHITTON ETAL. 2013).

CHENG (1982) referred the increased eating out rate to different facts. One is the easy availability of a huge variety of “cheap and delicious” foods in hawker centres, restaurant and coffee shops. Another reason is the higher employment rate of women and furthermore the physical separation of the work place and the home, which makes it necessary to eat out more often (CHENG 1982).

Breakfast: more Singaporeans (14.1% in 2010 compared to 6.9% in 2004) stated they skip breakfast. The majority of adult Singapore residents reported usually having home-prepared breakfast (55.6%). When eating out, breakfast hawker centres, coffee shop stalls or food courts were the preferred places (20.5%), followed by workplace/school canteens (8.4%). Among the Singapore Indian population 70.6% preferred to bring packed breakfast from home or eat breakfast at home.

Lunch: in total 70.7% of interviewed Singaporeans consumed lunch away from home, mainly in hawker centres, coffee shop stalls or food courts (49.9% versus 41.0% in 2004). Chinese were the ethnic group, which mostly preferred to eat lunch outside home (78.4%) while the majority of Indians (53.7%) preferred to bring packed lunch from home or eat lunch at home.

Dinner: most participants (65.5% compared to 73.6% in 2004) preferred homemade dinner. When going out for dinner 28.3% of the participants chose to go to hawker centres. The number of Singapore residents who stated they eat dinner at hawker centres, coffee shop stalls or food courts was with 28.3% in 2010 significantly higher compared to 21.3% in 2004. With 88.5%, the majority of Indian participants preferred to bring packed dinner from home or eat dinner at home (HEALTH PROMOTION BOARD 2010).

6.4. Singapore’s eating culture

“It appears irrefutable that Singaporeans really adore good food and they ‘live to eat’ than ‘eat to live’. Indeed, overwhelming evidences suggest that this love affair with food is intense and had possibly begun way back in the nations formative years, or even earlier.” (TAN 2010:35)

This statement of TAN (2010) described Singaporeans “*love for food*”, which is deeply anchored in their eating culture.

Singaporeans will queue easily for an hour just to eat the food they are craving for or that was recommended by friends, so they can join in the next conversation on the newest restaurants or stalls. As Cheng (1992:1-2) observed:

“Singaporean eaters brave snooty hawkers and long queues just for their favourite food (...) If eating is Singapore’s national pastime, queuing is the national habit that comes along with it.”

The countries inhabitants mostly from Malaysia, China and India, but also from other Asian countries shaped the history of Singapore’s eating culture. Their eating habits are often influenced by their different religions as well as by their traditional medical beliefs and bring along diverse food symbols, rituals, food preferences and taboos. Examples are the Halal food for Muslims, the hot-cold system of Chinese diet and the taboo of eating beef for most Hindus.

Over years living together as a multicultural society, different recipes were adjusted to local ingredients and recipes were mixed between the ethnic groups. Different ethnic cuisines are represented in its pure form as authentic Indian, Chinese, Malays, or other cuisines foods or as fusion food like Indian-Chinese food in Indian restaurants or the roti prata, typically sold in food courts and deriving from the Indian paratha.

Another kind of fusion food typical to Singapore is what HUAT AND RAJAH (2001) called the “*Islamization*” of Chinese food. In consequence of a greater consciousness to Malay food rules, Chinese restaurants and stalls in hawker Centres started to serve halal Chinese food, which, as one example, does not include pork or lard (HUAT AND RAJAH 2001). Another well-known example for Singapore fusion food is the Peranakan cuisine originated from a fusion of Chinese and Malay cuisine. It is rich in Malay spices and many dishes include pork (SINGAPORE NUTRITION AND DIETETICS ASSOCIATION 2013). The diversity of Singapore food range is best seen in the diverse opportunities for eating out as well as in the different grocery shops. Food outlets are ubiquitous in the entire country. Every one of the more than 250 shopping malls houses one whole storey of food and beverage outlets including at least one food court, fast food restaurants and general restaurants.

6.4.1 Eating and Socializing: Singapore’s hawker Centres and Kopitiam

Eating and socializing are closely connected in Singapore.

“For Singapore, away from home eating is an integral part of the culture.”
REBELLO (2012:23)

Numerous hawker centres and kopitiam are located within in the public housing estates.

Hawker centres and food courts are the most popular places to eat out in Singapore as shown in the National Nutrition survey 2010 (HEALTH PROMOTION

BOARD 2010). Therefore, characteristics of these facilities are explained in more detail. The hawker centres were mainly built in the years between the 1960 and 1980, with the intention to provide public food for sale in a clean and hygienic environment by replacing the numerous, often unhygienic, street food vendors. No new hawker centres were built since 1985. During the last years, the meaning of hawker centres as an option to eat out evolved. In 2012 there were 14.165 hawker centres registered under National Environment agency, excluding private hawker centres (DEPARTMENT OF STATISTICS SINGAPORE 2013b). The OXFORD DICTIONARIES (2013) defined a hawker centre in South East Asia as “(...) *a market at which individual vendors sell ready-to-eat food from small booths.*” They are usually consisting of around 10 to 20 stalls. While hawker centres are in a stand-alone open air building and supposed to be more traditional, food courts are air-conditioned and embedded mostly in shopping malls. The range of food in both is around the same.

Food stalls within the hawker centres and food courts basically offer foods from Singapore’s major ethnic groups like Indian, Malay, Chinese and so-called “Western” food. The latter is mostly referred to a piece of meat, steak like with French fries and beans in tomato sauce. Soups offered in these Western stalls are commonly ready-made mushroom soups.

In addition, some hawker centres include food stalls offering food from other Asian countries like Korea, Japan, Thailand, Indonesia or the Philippines. However, food stalls offering Chinese food are dominant overall. Drinks are available in separate drink stalls ranging from soft drinks to freshly prepared fruit juices and hot beverages. Desserts are also sold in separate stalls.

Stalls are classified with the letters A to D, while A stands for a high hygiene status D stalls need to be closed due to their lack of hygiene.

A kopitiam is a local coffee shop, typically found in whole South East Asia. Kopi is the Malay term for coffee. Arisen as simple food places and social centres in colonial Singapore, the kopitiam culture today is still part of the daily lifestyle amongst all classes and ethnic groups in Singapore. ENG (2010:225) described:

“The story of the Kopitiam in Singapore is deeply embedded within a larger historical and social narrative of migration and cultural diversity.”

Kopitiams in Singapore can mostly be found in town and neighbourhood centres of public housing estates. The shops offer coffee as well as small meals and are another example for a popular eating out opportunity. They also offer a range of Indian, Chinese and Muslim foods (ENG 2010).

Other traditional food places are ethnic restaurants in the ethnic districts of Chinatown, Little India and Geylang (Malay district).

While hawker Centres, kopitiam and the ethnic restaurants in the ethnic districts are the more traditional way for Singaporeans to eat out, in recent years numerous fast food places came up, serving more to the younger population (HEALTH PROMOTION BOARD 2010). They compose 6.2% of the total Food and Beverage outlets but 12.2% of the operating receipts, showing their popularity (SINGAPORE DEPARTMENT OF STATISTICS 2012).

Restaurants offering Western cuisine, fusion food or high-end ethnic food are mostly found in tourist areas or five star hotels.

The multicultural cuisines of Singapore represent an example for the bidimensional perspective of the dietary acculturation process. It demonstrates the dietary acculturation of the host society in Singapore to the foods and eating styles of migrants from diverse cultures.

6.4.2 Food as a symbol of multiculturalism

Every nation has its own eating culture and often food has a symbolic meaning for a population and is thought to convey a sense of home. For the people of Singapore the meaning of food goes beyond this. TARULEVICZ (2013) explained that for the society of Singapore, which was subject to fundamental changes in recent years, food provides a meaningful bonding to the past.

She described food as a “*national symbol*” and a “*unifying practice*” for the diverse society of Singapore. In festivals like Chinese New Year or Deepavali, family functions like weddings or funeral services, company celebrations, meeting with friends or in the private daily life – food gets the highest priority for Singaporeans and often has a symbolic character for the described events. Special foods are related to the diverse ethnic festivals.

Government leaders often use food as a symbol for the countries multiracial harmony on official occasions such as National Day celebrations. For these functions Indian curries, Malays sates and Chinese noodles will be served to represent the three major cuisines of Singapore (HUAT AND RAJAH 2001:187). Also in touristic places like the Singapore Zoo (as shown in Figure 11) food is used as a symbol for multiculturalism as well as to serve to the major ethnic groups.



Figure 11: Diverse ethnic cuisines offered in the Singapore Zoo (source: author's own)

6.4.3 Food and health

Not only is food and eating itself of fundamental importance for the people of Singapore. It is also the connection between health and diet which draws the people's and furthermore the government's attention. The government takes responsibility for the people's healthy nutrition. According to the results of the National Nutrition Surveys and the National Health Surveys, programs were conducted countrywide to encourage the people of Singapore to participate in healthier nutrition. One example is the "Singapore's Healthier Hawker Programme" conducted in 2011 by the Health Promotion Board Singapore and the National Environment Agency. It is based on the results of the National Nutrition Survey 2010, which showed that 60.1% of Singaporeans eat out regularly compared to 48.8% in 2004. Hawker centres were identified as the preferred places to eat out. The program asked hawkers to use healthier ingredients in their cooking such as cooking oils with lower saturated fat content, wholegrain noodles, brown rice and salt with reduced sodium. Contributing stalls are labelled. Also calories can be labelled on the menu to mark healthier meals with less than 500 kcal (HEALTH PROMOTION BOARD 2013).

The Healthier Choice Symbol, Healthier Snack Symbol and Healthier Ingredient Symbol are labelled on packaged food products. They support the consumer to make healthy food choices when grocery shopping, by indicating that labelled products are healthier options. The symbols are also used in the supermarket's weekly specials. Healthier choice campaigns are conducted as well in restaurants, canteens and schools. Domestic helpers received trainings to prepare healthier food for their employees.

The Health Promotion Board Singapore offers “healthier food trails” liable for costs and classified in supermarket tours or gourmet tours showing options for healthier choices.

Figure 12 represents an overview of the campaigns and programs done by the health promotion board to encourage and help Singaporeans to improve their diet by a healthier food choice.

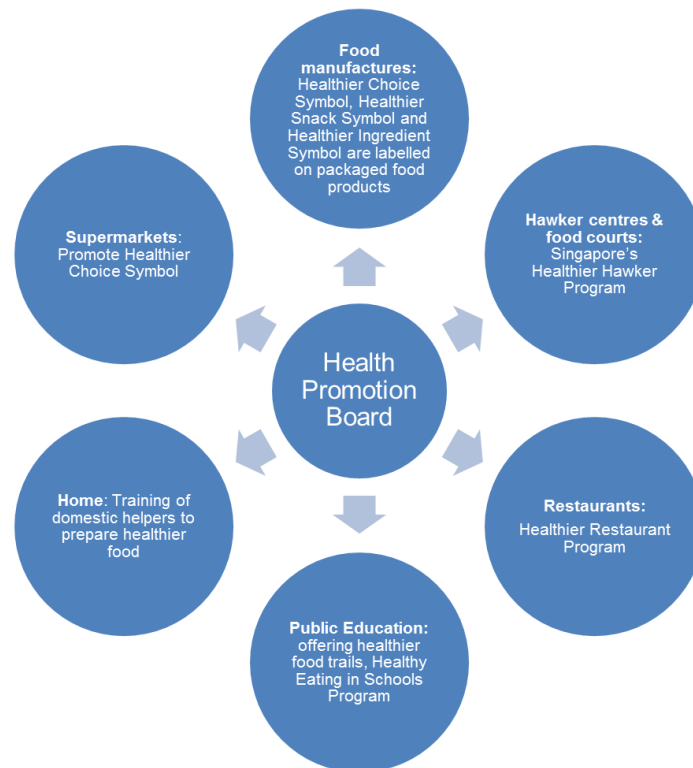


Figure 12: Campaigns and Programs of the Health Promotion Board Singapore to support a healthier diet for Singaporeans (source: modified from Soon 2013)

7. TWO CULTURES CONVERGE: INDIA AND SINGAPORE AT A GLANCE

This chapter presents a summary of the chapters II 5 and II 6 and includes additional information, to provide an overview on the characteristics of the two cultures Singapore and India with a focus on their eating habits (Table 6).

Table 6: Facts about India and Singapore at a glance (source: modified from diverse sources, please refer to table)

Socio-demographic information	Singapore	India
Geographical position	Southeast Asia	South Asia
Climate condition	Hot, humid	Mixed from hot and humid to cold and dry
Specials	Strict rules for safe ethnic and religious harmony	Caste system
Government	Unitary parliamentary constitutional republic	Federal parliamentary constitutional republic
Population (in 2012)	5.312 Million, 7422 persons per km ²	1.237 Billiards, 368 persons per km ²
Religion	"mixing and matching" (SINHA 2009:89): Buddhism predominant	Hinduism predominant
Language	English, Bahasa Malay, Mandarin, Tamil, "Singlish"	In South India: Tamil, Malayalam, Telugu, Kannada, English
GDP per capita (current US\$), 2012 ⁶	51,709	1,489
Women in labour force (in %)	56,5 (2011)	29 (2011)
Eating behaviour		
Staple (gram/capita/day)	Rice, 208	Rice, 128
Vegetables (gram/capita/day)	238.9 (HEALTH PROMOTION BOARD 2010)	157.8 rural India 167.7 urban India (GAIHA ET AL. 2012)
Pulses (gram/capita/day)	24.4 (HEALTH PROMOTION BOARD 2010)	255.7 rural India 290.6 urban India (GAIHA ET AL. 2012)
Meat/Seafood (gram/capita/day)	190.5 (HEALTH PROMOTION BOARD 2010)	10.7 rural India 13.2 urban India (GAIHA ET AL. 2012)
Milk and milk products (gram/capita/day)	271.2 (HEALTH PROMOTION BOARD 2010)	117.3 rural India 157.9 urban India (GAIHA ET AL. 2012)
Fruits (gram/capita/day)	198.6 (HEALTH PROMOTION BOARD 2010)	16.5 rural India 45.3 urban India (GAIHA ET AL. 2012)
Eating out	60% of population eat out 4 times per week or more (HEALTH PROMOTION BOARD 2010)	On average 2 to 3 times per month (NATIONAL SAMPLE SURVEY ORGANISATION 2007)
Western fast food, McDonalds as example	120 outlets [homepage company Singapore, Nov 2013] => 1 outlet per 44.267 inhabitants	270 outlets in 2012 (EUROMONITOR INTERNATIONAL 2013) => 1 outlet per 458.148
Eating culture	"love affair" (TAN 2010:35)	"A healthy diet produces a healthy body and a healthy body produces a healthy mind." (KINGSLAND 2008:74)
Grocery shopping	mainly supermarkets, wet markets recently more online	mainly wet markets, Kirana Stores, recently more supermarkets

⁶ <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>

III EMPIRICAL FRAMEWORK

The Empirical Framework describes the aim of this study, followed by the research questions. Further, the methods that were used to conduct the study are explained. A survey design provides an overview of the survey process. Data analysis will be described followed by an excursion into the researcher's role in the survey. The last subchapter covers the validity of the study.

1. AIM OF THIS STUDY

PATTON (1990:150) described that getting clear about the aim of a study should be the first step in a research process as this allows further defining of the used steps including methods, analysis and reports. This study is incorporated into basic research with the purpose to "understand and explain" the phenomenon of dietary acculturation of first generation Indian migrants in Singapore (PATTON 1990). Understanding the process of dietary acculturation of migrants has been identified as an area in great need of research. Studies on dietary acculturation of Indian migrants are limited and were mostly undertaken in the USA and in Canada (BHARMAL ET AL. 2013; CHAPMAN, RISTOVSKI-SLIJEPCEVIC AND BEAGAN 2011; JONNALAGADDA AND DIWAN 2002; KALRA ET AL. 2004; RAJ, GANGANNA AND BOWERING 1999). At present, there is no study, which investigates the eating behaviour of first generation Indian migrants living in Singapore.

Moreover, several studies on dietary acculturation of Indian migrants used a quantitative approach, neglecting to obtain comprehensive backgrounds on the entire process and its affecting factors.

There were three major objectives in this study:

The first aim is to collect retrospective data on the participants' eating behaviour in India and to examine their actual eating behaviour in Singapore to identify the continuity and alteration in the migrants' traditional eating behaviour.

Secondly, there is an aim to identify and investigate factors that affect the migrants' eating behaviour. This includes self-identified as well as derived influences on the migrants eating behaviour in social, personal and cultural circumstances.

The third aim is to examine changes in lifestyle on a social, personal and cultural level (e.g. practicing religion, preferred language) since the migrants' arrival in Singapore. The intention was to determine the interrelation between dietary acculturation and other acculturation aspects. Previous studies on

dietary acculturation found low acculturation related to healthier diets (NEUHOUSER ET AL. 2004; SATIA-ABOUTA ET AL. 2002b). Therefore, this study intended to investigate if there is a correlation between the migrants eating behaviour and other acculturation factors in Singapore as well.

The results of this research might help to provide a better understanding of the whole process of dietary acculturation. By knowing which are the main influencing factors for Indian migrants in Singapore on their eating behaviour and by understanding the relationship between acculturation and eating behaviour, selective precautions can be developed to prevent diet-related disease and support healthy eating styles.

2. RESEARCH QUESTIONS

Based on the results of the literature research, the current state of science and the aim of the study, the research questions (RQ) are as follows:

- RQ1 Did Indian migrants change their eating behaviour after moving to Singapore and if so, in which ways did they change it?
- RQ2 What were the main factors affecting dietary acculturation?
- RQ3 Is there an interrelation between dietary acculturation and other acculturation factors?

To allow a target-orientated preparation of the survey, the research questions were specified. The specification is based on the findings of the literature research on eating behaviour in India and Singapore. Diverse aspects described in the theoretical framework were used to render research questions more precisely.

Specifying RQ1:

Eating behaviour in India:

- What did a common daily diet of participants look like in India? Which foods were mainly consumed?
- Did the participants eat fast food? If yes, which kind of fast food and how often did they consume it?
- Where did they mainly consume food? (home, canteen, restaurant etc.)
- Who was responsible for food purchasing and preparation?

Eating behaviour in Singapore:

- How did the eating behaviour change after moving to Singapore?
- What does a common daily diet of participants look like in Singapore? Which foods are mainly consumed?
- Were there any changes in consuming fast food?
- Where do they mainly consume food in Singapore? (home, canteen, restaurant etc.)
- Who is responsible for food purchasing and preparation?
- Where do the participants purchase their groceries?

Specifying RQ2:

- Which circumstances were from the participants' point of view responsible for changes in their diet?
- Did the participants follow certain traditions concerning their eating behaviour? (fasting, festival food, Prasad)
- Were there any influences on the dietary patterns by religion or caste?
- Which person and media influenced the participants' food choice and eating behaviour?
- How willing is the participant to try non-Indian food in Singapore? What does she/he think about non-Indian food?
- What are the participants' perceptions of a healthy diet? Do perceptions vary by age, gender, length of time in the Singapore, or age of migration?
- How would she/he feel without eating Indian food for one week? Which status does food/Indian food have for her/him?
- Does dietary acculturation and factors affecting dietary acculturation differ by socio-demographic data (age, gender, length of time in Singapore, family status, housing situation, profession etc.)?

Specifying RQ3:

- What were the main reasons for the relocation?
- How were the participants' feelings when relocating to Singapore?
- How do they like Singapore? Could they imagine staying there forever?

- Is the participant a traditional and religious person? Did her/his life change concerning traditions and religion since living in Singapore?
- Which status has the Indian caste system in the participant's life in India and in Singapore?

3. METHODOLOGICAL APPROACH AND APPLIED METHODS

Considering the methodological approach leads directly to weighing up the disadvantages and advantages of qualitative and quantitative data (PATTON 1990:13). While quantitative questionnaires compel participants to customize their answers into the given categories, qualitative interviewing allows participants to *“express their own understandings in their own terms”* (PATTON 1990:290). This allows the researcher to disclose and understand the background behind any little-known circumstances (STRAUSS AND CORBIN 1990:19). In terms of the sample number and the findings, quantitative research allows investigating the reaction of a large number of participants and generalization of the results. Qualitative research typically includes a smaller sample where generalization is limited, but information is more detailed (PATTON 1990:14).

Clarifying the indication for using qualitative methods is a first step to securing and improving the quality of qualitative research (FLICK 2009:518). The methods must be responsive to the researched subject (RICHARDS 2005:39). In the present study, a qualitative approach was used for two major reasons.

HODGES AND WIGGINS (2013:256) stated that the majority of studies on eating behaviour of migrants *“have tended to assume an overly reductionist approach applying quantitative methods to explore nutrition and health (i.e., the consumption of particular food groups).”* Qualitative approaches were used only in a few studies. Conducting a qualitative approach will help to achieve contextual understanding of cultural subjects and their relationship to the migrants eating behaviour. Therefore, the primary method used in this study is a qualitative approach.

The second reason for using a qualitative approach in this study is the fact that to this date there is no study on dietary acculturation of first generation Indian migrants in Singapore. Nothing is known about eating behaviour and related influencing factors of this population. Due to the absence of basic information, a qualitative approach is necessary to answer the research questions.

Literature research on studies related to dietary acculturation and general acculturation was undertaken to get information on applicative methods.

Several studies showed that using one single method is not sufficient to collect encompassing information on the process of dietary acculturation and its interaction with acculturation factors (CASTELLANOS AND KATHERINE 2011; FRANZEN 2009; PATIL, HADLEY AND NAHAYO 2009; SATIA-ABOUTA 2003; VARGHESE AND MOORE-ORR 2002).

DENZIN AND LINCOLN (2011:5) confirmed that *“the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon in question.”*

Based on suggestions of SATIA-ABOUTA (2003) single-item acculturation indices, an acculturation scale and food based measures have been used in this study in combination with a semi-structured in-depth interview.

This allowed the collection of comprehensive information from each participant and at the same time keeping the interview time endurable.

Additionally using a multi-method approach, triangulation, is an alternative to validation by adding breadth, depth and consequence to the methodological approach (FLICK 2009).

Methods used in this study are shown in Table 7 and will be described in the following subchapters. In this table, the methods were related to the information they provide and to the research questions.

Table 7: Methods used within the survey (source: author's own)

Information	Method	RQ
Socio-demographic data	Questionnaire	2
Dietary acculturation, acculturation, affecting factors on dietary acculturation	In-depth interview	1 - 3
Dietary acculturation	24-hour dietary recall	1
Acculturation	EAAM (East Asian acculturation measure), single acculturation aspects	3
Significant specifics before, while and after the interview	Observation guide	1-3

3.1. Semi structured in-depth interview

Qualitative interviewing was the main research tool used in this study. When using the method of interviewing to collect qualitative data, three basic approaches can be distinguished. They all have in common *“(...) that the*

persons being interviewed responds in their own words to express their own personal perspectives." (PATTON 1990:280) However, the approaches differ in their level of structure.

The informal conversational interview is based on spontaneous questions and relies on interaction with the participants. Questions arise from the context hence no interview guide will be used. This is the most unstructured kind of interview. The method is typically included in participant observation fieldwork, wherein the interviewee might not even notice that he gets interviewed. The informal conversational interview is useful when the researcher can stay in the setting for a longer period. This interview method is time consuming and the inconsistency in the interview questions makes the data analyses very comprehensive (PATTON 1990:280).

The standardized open-ended interview is used when there is a limited time frame and the same questions are asked to each person. The researcher plans exactly, which questions will be asked during the interview. Hence, this is the most structured interview method. The structuring also simplifies choosing the instrument for data analysis. The standardized open-ended interview is useful for evaluation purposes as *"(...) it can be helpful to minimize issues of legitimacy and credibility."* (PATTON 1990:286) This interview method does not allow flexibility in form of in-depth questions or raise new questions spontaneously in the context of the interview (PATTON 1990:286). As the present study aspired to allow flexible questioning depending on the emphasis participants put on the topics, this kind of interview was not considered for this study.

This study uses the interview guide approach. The interview guide includes topics and issues, which should be covered within the interview and which are specified in advance in a draft form. The researcher is free in asking and wording the questions within the interview depending on the context, while keeping the focus on a particular topic. It is the free decision of the interviewer to scrutinize or deepen a topic or to lead the participant back to the topic if the specifications are too detailed. This is why this type of interview is also called "semi-structured" (PATTON 1990:283; FLICK 2009:223). The interviews were conducted face-to-face, which allowed for participant observation during the interview. Furthermore, face-to-face interviewing provided a more personal atmosphere, which was advantageous when asking personal questions. Face-to-face interviews are the most flexible method of data collection and tend to have the highest respond rate compared to telephone interviews or Email-questioning (DE LEEUW, 1992). Finally, for using the 24-hour dietary recall and

East Asian Acculturation measure within the survey, face-to-face interviewing was the most practicable method.

The interview guide

The interview guide builds *“the most important bridge between the researcher’s interest and the field”* (WITZEL AND REITER 2012:51). Therefore, the interview questions should be closely linked to the research questions. Still, the questions need to be phrased in a colloquial and understandable for participants.

LOFLAND AND LOFLAND (1995:85) explained regarding the interview guide *“(...) it is a list of things to be sure to ask about when talking to the person being interviewed.”* He recommended preparing the interview guide with great care but to be less formal and less structured than a questionnaire (LOFLAND AND LOFLAND 1995:78). The interview guide includes the whole problem background of the study classified in diverse subject areas. Each subject area contains diverse contents referring to its theme and worded as headword or in interrogative form. The interview guide should serve as a useful aid for orientation during the interview. While the interview should ideally be guided based on the participants’ answers, the interview guide is accompanying, in the background and helping the researcher cover her interests or supporting her when the interview stagnates (WITZEL AND REITER 2012).

HOPF (1978:97) warned about *“bureaucratization”* of the interview by sticking too closely to the interview guide during the interview. To provide as much flexibility within the interview as possible, while still focusing on the interested topics, questions were not worded into interrogative form in the interview guide. This allowed choosing the wording and type of question spontaneously and in relation to the particular interview situation and it enabled the use of probing questions. Using headwords instead of pre-formulated questions also *“helps to reduce the artificial character of a conversation”* (WITZEL AND REITER 2012:53). Furthermore sticking to fixed questions is likely to limit the extent of collecting significant data. MERTON (2008:48) criticized that interviewers who used fixed questions, failed to listen to the participants answers and to react to unanticipated implications. He also recommended using the interview guide as a checklist to ensure significant themes are covered within the interview.

The interview guide was created with the help of mind mapping. The coequal composition of the subjects allowed the interviewer to switch between the subjects during the interview flexibly. This avoids following a rigid sequence of questions (BUBER AND HOLZMÜLLER 2009:471). Probes were connected to the

major topics to make sure the researcher probes for issues that are not mentioned spontaneously by the interview partner (LOFLAND AND LOFLAND 1995:82).

Small boxes were allocated to each subject area on the interview guide to make a tick once the subject area was covered.

The interview guide is attached as appendix A6.

Gathering socio-demographic data

Socio-demographic data are most practical when arranged within a questionnaire. LOFLAND AND LOFLAND (1995:82) called this the “*facesheet*”, because it is mostly arranged as the first sheet of the interview guide, even if it might be asked at the end of the interview, depending on the situation. WITZEL AND REITER (2012:11) termed it the “short questionnaire”, which they recommended is best used at the beginning of the interview as answers may provide information for the initial interview question. Requested information within this questionnaire depend on the purpose of the interview and are therefore varying for each study (LOFLAND AND LOFLAND 1995:83). In this study, requested socio-demographic data were chosen based on the research questions and information from the literature research. Especially affecting socio-demographic factors on the process of acculturation and dietary acculturation (see chapter II 1.1 and II 2.1), which were identified within the literature, were requested within the questionnaire.

The questionnaire is attached as appendix A4.

Participant observation

Patton described the time after the interview as “(...) *critical to the rigor and validity of qualitative inquiry*” (PATTON 1990:352). He recommended writing down observations about the interview immediately after the interview has been finished (PATTON 1990:353). WITZEL AND REITER (2012:11) suggested writing a “post script”, a self-debriefing tool on observations captured during the interview. It should include the interviewer’s overall impression of the interview, nonverbal aspects, reactions and behaviour of the participants during the interview, the interviewer’s role within the interview, external influences, the room in which the interview took place and further observations which would help to holistically interpret the interview (WITZEL AND REITER 2012:11).

LOFLAND AND LOFLAND (1995:83) recommended that the “*post interview*” should also include the “*emotional tone of the interview*” and apparent difficulties. HELFFERICH (2009:193) named describing the interview atmosphere and the interaction between the interviewer and the participant as the most important part of the “interview protocol”.

In this study, an “observation guide” was generated to help consider the same questions after each interview and allow a structured review of the interview situation. The guide included aspects of the interview situation, the interaction or relation between the researcher and the participant, the participants’ behaviour, before, during and after the interview, the room and the time frame. The observation guide is attached as appendix A8.

3.2. 24-hour dietary recall

One major aim of this study was to explore dietary changes of Indian migrants after they moved to Singapore. Therefore, a dietary assessment tool was used to gain comprehensive information on the participants’ dietary intake in addition to the interview information. Commonly used food-based measures in previous studies on dietary acculturation of a migrant population were the Food Frequency Questionnaire (see for example JONNALAGADDA 2002; KUDO, FALCIGLIA AND COUCH 2000; MAHADEVAN 2003; VARGHESE AND MOORE-ORR 2002) and the 24-hour dietary recall (see for example BATIS ET AL. 2011; GUENDELMAN AND ABRAMS 1995; JONNALAGADDA AND DIWAN 2002; KIM ET AL. 2007).

A food frequency questionnaire includes a list of foods and the participant is asked to estimate the frequency of consumption of the listed foods (CADE ET AL. 2002). This assumes to generate a list of foods and is therefore contrary to the purpose of this study in which the participants should term the food they consumed by themselves to gain comprehensive information on their eating behaviour. It would also not have been possible to generate a list of foods, as this is the first study on eating behaviour of first generation Indian migrants in Singapore. Hence, data to generate a food list is non-existent.

Consequently, the 24-hour dietary recall was the preferred and used method in this study as the participants are requested to term the consumed food items by themselves. Dietary data were obtained from a single 24-hour recall of the types and amounts of all foods consumed on the previous day. Requested information was clustered into meals (breakfast, lunch, dinner and snacks). Amounts were only required as rough rule of thumb as this was not significant information for the study. Additionally, it was required to give information if the food was eaten outside or at home and at what time the food/meal was consumed. In the last

column of the questionnaire, participants were requested to decide if they classify the consumed food as “Indian food”, “Western food” or “Other Asian food”. “Western food” included all kinds of food that are not from any Asian country like fast food, Italian food, Mexican food etc. The item “Other Asian food” meant every Asian food, other than Indian. This information helped to understand in the data analysis how the participants assign value to the food.

The 24-hour dietary recall was conducted to achieve additional information on the participants’ diet. The data of the recall were used solely to deepen the participants’ interview statements about their eating habits. There was no intention to analyse the nutritional value of the participants’ diet, as this was not the purpose of the study. The 24-hour dietary recall is attached as appendix A5.

3.3. Methods to measure acculturation

As explained in chapter II 1.2, acculturation can be measured by different methods. This study uses a combination of measurement and single aspects to answer the research questions. Methods are explained in the following.

The East Asian Acculturation Measure (EAAM)

One purpose of this study was to investigate dietary acculturation in the context of the general acculturation process. This means the study is exploring if there is an interrelation of dietary changes and other changes in the personal, social and cultural environment of the migrants’ daily life, after they migrated to Singapore. To gather information on these subjects, correspondent questions concerning the migrants’ way of practicing their religion, traditions and caste have been asked during the interview. In addition, questions on reasons for their migration, their opinion about their life in Singapore and plans to stay in the country for good were included during the interview. However, to keep the interview time reasonable, a questionnaire was needed to gain additional comprehensive information on the migrants’ acculturation status. There is a high quantity of acculturation scales available. As described in chapter II 1, acculturation mostly does not occur in a linear or unidimensional way, meaning that acculturation will not only happen by assimilation but also by keeping traditions of the home country. Therefore, a bidimensional approach was chosen to measure acculturation. The East Asian Acculturation Measure (EAAM) is a 29-item self-report questionnaire (BARRY AND GRILO 2003). In this study, a 6-point Likert type scale was used to avoid neutral answers. Within the bidimensional approach of BARRY (2001) the four strategies of acculturation outlined by BERRY (2005) are measured: integration, assimilation, separation

and marginalization. At the same time this scale was developed for East Asian migrants but also for migrants of other Asian countries (BARRY 2001) and does therefore respect characteristics of the Asian population. The EAAM is attached as appendix A7.

Measuring cultural and psychological aspects of the acculturation process

The EAAM is focusing on *“attitudinal and behavioural facets of social interactions and communication styles (...) in various settings”* (BARRY 2001:195).

It neglects the investigation of cultural changes and the overall wellbeing of the migrants in the host country. CABASSA (2003) suggested investigating aspects, which are more related to cultural changes, as these are more eligible to explore how moving to the host country affected the migrants' cultural orientation.

RANGASWAMY (2000:245) found that for Indian migrants in the US, religion is one of the *“most important and innovative”* ways for them to maintain their affiliation with their home country. Hence, religious issues were investigated as one acculturation aspect in this study. Caste is another major issue in the Indian culture and was also used as an acculturation aspect.

Furthermore, a relationship has been identified between the migrants' wellbeing in the host country and their acculturation process. Migrants suffer from acculturative stress due to diverse problems in the host country like discrimination or depression in employment (SAMUEL 2009). As it would go beyond the scope of this study to identify details on acculturative stress of Indian migrants in Singapore, an emphasis was placed on the overall identification and connection with the host country to receive an impression of how the participants think about their life in Singapore. Therefore, in addition to the EAAM, the migrants' acculturative changes in cultural aspects of their daily life were captured by corresponding questions within the interview as well as their attitudes towards the host country.

Summary: Acculturation was determined in this study based on single aspects, and by conducting the EAAM (Table 8). Single aspects included cultural issues and the wellbeing of migrants.

Table 8: Sources to analyse acculturation aspects (source: author's own)

Acculturation aspect	Information source
Social interactions and communication styles	EAAM
Practising religion in host country	Interview question concerning the practicing of religion in India and SGP, e.g. temple visits, the habit of praying, celebrating
Practising caste in host country	Interview questions related to caste and its role in daily life in India and SGP
Initial phase in SGP, attitude towards Singapore, future plans and home trips	Interview question on the participants experiences when leaving India and during their first weeks in SGP, life in SGP in general, how they like life in SGP, if they can imagine to stay there forever

4. THE SAMPLE: REQUIREMENTS AND SAMPLE SELECTION

“Sampling is crucial for data analysis.” (MILES AND HUBERMAN 1994:27)

When considering the inclusion criteria, the sampling strategy and the sample size, the purpose of the study is a significant criterion (PATTON 1990:168).

The sampling process of this study will be explained in the following two subchapters.

4.1. Inclusion criteria for the sample

Concerning the significance of the sample size Patton (2009:185) explained:

“The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information-richness of the cases selected and the observational/analytical capabilities of the researcher than with sample size.”

Typically, in qualitative research, detailed data from a small number of cases is gained (MILES AND HUBERMAN 1994:27). However, when deciding on sample size, it is necessary to consider, if the aim is to collect a restricted number of information for a larger sample or a broader range of information for a smaller sample. For considering these aspects, the purpose of the research is an issue as well as the time frame of the interview. For this study, a sample of 24 participants was defined. Due to the range of the interview guide and expected time for 24-hour dietary recall and EAAM, this seemed to be a reasonable number to conduct and analyse by a single researcher.

The sample was composed of first generation Indians living in Singapore with the following inclusion criteria:

Table 9: Inclusion criteria for participants (source: author's own)

Age	20 – 60 years
Home part of India	South India
Religion	Hindu
Length of stay in Singapore	More than 1 year
Citizenship	Indian

These inclusion criteria as shown in Table 9 were chosen due to the actual socio-demographic structure of Indians living in Singapore.

Based on the Census of Population 2010 by the Singapore Department of Statistics 348.119 Indians lived in Singapore. These Indians are either Singapore citizens or permanent residents. 200.919 of them are born in Singapore (WONG 2011). There is no detailed data available on first generation Indian migrants in Singapore, born in India and holding Indian citizenship. Therefore, the data of the Census on Indians living in Singapore had been used to choose the survey sample. Single requirements will be explained in the following. Beside these requirements, good English speaking skills were presumed, as no interpreter was involved in the interviews.

Age

According to the Census of Population 2010 Indians living in Singapore as permanent residents or residents, belong to age groups, shown in Table 10. The predominant number of the Indian population in Singapore is between 20 and 59 years. Therefore, for the survey the age group between 20 and 60 was selected.

Table 10: Indian population in Singapore by age group (source: modified from WONG 2011)

Age	Number of Indians living in Singapore	Numbers in %
0 – 19	97.695	28
20 – 59	218.609	63
60 and above	31.815	9

Home part of India

South Indians formed more than 80% percent of the Indian population in Singapore whereas people from Tamil Nadu compose 62% of the Indian population in Singapore (SANDHU 1993). Therefore, being from South India was one requirement of the participants.

Religion

Hinduism was chosen as the preferred religion of the participants because 58.9% of Indians living in Singapore, aged 15 years and older, believed in Hinduism (WONG 2011).

Length of stay in Singapore

Participants were required to live in Singapore for more than one year. The reason for this is based on the United Nations (UN) definition for a long-term migrant, which is used within this study. The definition says, a long-term migrant is:

“(...) a person who moves to a country other than that of his or her usual residence for a period of at least a year (...) so that the country of destination effectively becomes his or her new country of usual residence.” (UNITED NATIONS 1998:18)

The inclusion criteria did not consider the issues of language and education. However due to the intention to conduct the interview, including the use of questionnaires, in the English language, reasonable English speaking skills were presumed. This in turn entailed a sample of highly skilled participants, as English is a common language in Indian schools and universities and a requirement of most Singaporean companies when offering employment.

4.2. Sampling strategies

Two major approaches of sampling can be distinguished: probability sampling and purposeful sampling. Probability sampling does involve random selection of a statistically representative sample. It is used within quantitative studies, which typically depend on larger samples. The quality of purposeful sampling depends on the selection of information-rich cases, which provide comprehensive information on important issues for the purpose of this research (PATTON 1990:169).

PATTON (1990:181) differentiated between several strategies for purposeful sampling that all aim to gain information-rich cases. He admitted that multiple sampling strategies might be required to fit the purpose of the study. In this study, a criterion strategy was combined with snowball sampling. Criteria were defined as described in chapter III 4.1. Considering these criteria, the first interview partner was chosen, who was a friend of the researcher. After that first interview, the researcher asked the first interview partner to recommend or introduce her to other migrants from South India who matched the inclusion criteria. Via snowball sampling, more participants were found. Out of the first

nine participants, seven participants were single, six men and one woman. Data showed that single men obtained no new information concerning the research questions. Therefore, the researcher decided to interview married participants and single women. The following sample structure aspired:

Table 11: Aspired and de facto structure of the sample (source: author's own)

	Female participants		Male participants	
	Aspired to interview	De facto interviewed	Aspired to interview	De facto interviewed
Single	6	3	6	6
Married	6	11	6	4

Married women were easily found with the help of the researcher's Yoga teacher. Sampling single women was not that easy so only four single women were found in total. Concerning married men, four had been interviewed, while two of them lived together with friends because their female partners were in India to give birth at time of the interview. For these two men a similar eating behaviour to that of the single men was identified. For the two married men living together with their families, interviews happened were not too meaningful concerning the research questions. PATTON (1990:169) stated, that gathering information-rich cases is an important issue to achieve the purpose of the study. Therefore and due to the fact that it was difficult to find married men who wanted to join an interview, an emphasis was given to interviewing married women. The defined inclusion criteria were always an issue during the sampling process. However, the sample included two Christians and one woman from Mumbai, which was only identified during the interview.

The first contact with participants was mostly by Email, sometimes by phone. After they expressed basic interest in the research, an information letter was sent to them by Email. This letter informed them about the inclusion criteria, the research topic and its purpose, the estimated interview time frame and a short introduction about the researcher. The information letter is attached as appendix A1. After receiving the information letter, usually the migrants' confirmed participating in an interview. Subsequently, the interview place and time was arranged.

During the sampling process, an emphasis was placed on finding information-rich cases to achieve the research purpose rather than on finding an adequate statistical sample. Hence, the sample strategies used in this study helped to optimize the probability of describing a full range of the phenomenon of dietary changes, affecting factors and interrelation to other aspects of the acculturation process for first generation Indian migrants in Singapore.

5. PREPARING AND CONDUCTING THE SURVEY

Interviewing generates an interactive relationship where the interviewer and the interview partner produce data. Therefore, it is necessary to reflect on the interview process before starting an interview (RICHARDS 2005:43-44). Not only how interview questions will be asked (PATTON 1990:295), but also the setting in which the interview will take place, might have an influence to the data quality (HESSE-BIBER AND LEAVY 2010:99). Further influences come from cultural differences between the researcher and the participants. All these aspects require a comprehensive preparation of the survey. An analysis of the research setting, undertaken preparations, as well as the survey process itself will be described in the following three subchapters.

The setting analysis, sampling preparations and the survey process are shown in Figure 13 to provide an overall view.

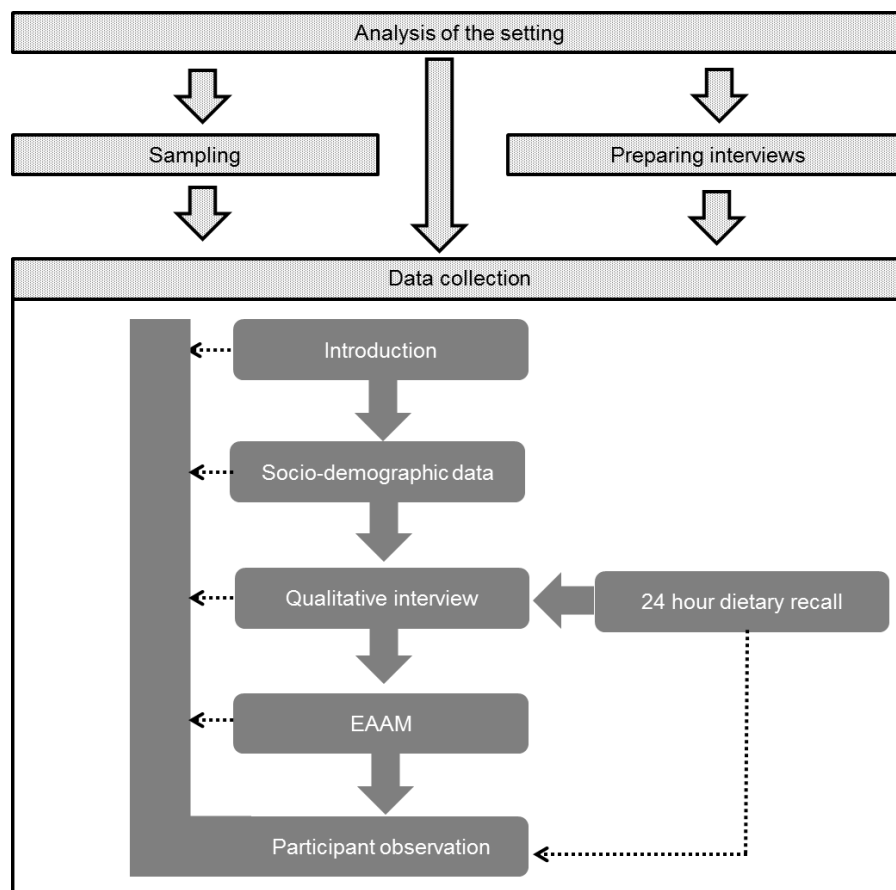


Figure 13: The survey process including preparations (source: author's own)

5.1. Analysing the setting

“Before you decide how you are going to ‘get’ your data, you will need to observe the situation you are about to enter and reflect on the new situation to be created by your research, considering how settings and conversations might affect what people feel and see and say.” (RICHARDS 2005:39)

Analysing a setting includes the physical environment like supermarkets, temples or restaurants, as well as the social environment of participants, like the ways that people gather and organise themselves into groups and how they interact (PATTON 1990:221-222).

The Indian influence in Singapore can already be found in the country's name, which is derived from Sanskrit, the primary language in Hinduism. “Singa” means lion and “pura” is the city, hence the translation is “lion city” based on a novel. The Indian culture is present in Singapore's daily life. Numerous Indian communities exist in the country representing the Indian and Hindu culture. Beside this, the Indian culture is represented in form of Indian Newspapers, TV, schools and literature with an emphasis on Tamil culture. To become furthermore acquainted with the setting Indian migrants come across when they move to Singapore, several steps were done as described in the following.

Attending an Intercultural Training about Singapore

The researcher joined a three-day intercultural training at the beginning of her stay in Singapore. This provided insight into the culture of the three ethnic groups in Singapore, including the Indian one. It helped to prepare the interviews, for example keeping a list with manners and customs to be aware of during the interviews. Furthermore, the intercultural training provided an insight into the relations between members of the three ethnic groups and their dealings with one another.

Participating in an Ayurveda cooking class

The class was organised by the AYURVEDA ASSOCIATION OF SINGAPORE, and attended by the researcher with the intention to receive basic knowledge about the practise of Ayurveda in the context of cooking and home remedies. A further reason for attending this class was to investigate the status of Ayurveda in Singapore.

Basic recipes and rules of the Ayurveda kitchen and its role in the modern Indian cuisine were taught within the class. The teachers were Singapore

Chinese and participants were mostly Singapore Chinese, a few Singapore Indians and students from other Asian countries. Conversations with teachers and participants showed that the status of Ayurveda in view of health treatment is of minor importance in Singapore. Insurances cover merely consultations of allopathic doctors, treatment by Ayurvedic doctors have to be paid by the patients. However, the teachers explained that there is an interest in alternative medicine and home remedies of the major ethnic groups in Singapore, which are Chinese, Malay and Indian people. This interest is based on the peoples history as alternative medicine and home remedies always took a major role in their past to be able to treat minor disease by themselves.

Information gathered from this class, helped the researcher to gain a better understanding of both, the practise and theory of Ayurveda. It provided the necessary background to ask probing questions about Ayurveda during the interviews.

Taking a guided tour through Little India

A Singapore Chinese female tour guide conducted the tour. Participants were not only tourists from different countries, but mainly expatriates and some Singaporeans who wanted to learn more about the Indian culture. The intention of joining this tour was to become acquainted with the Indian district in Singapore and to learn more about the Indian culture with an emphasis on Indian food.

In former times, Indians, mostly from Tamil Nadu, predominantly inhabited Little India. Due to the government policy of racial harmony, which intends to avoid ethnic enclaves, nowadays Indians live all over the island. However, Little India keeps the cultural heritage of the early Indian settlers and is rich in architecture, culture and history. Indian temples, restaurants, wet markets, clothes shops, jewellers, Ayurveda health shops, beauty salons, travel agencies, spice stores and local food shops can be found there. Little India is the place where Indians meet to celebrate their festivals. On weekends, it is the meeting place for Indian workers to gather as well as for Indian housewives to buy their groceries and other Indian wares. However, it has to be said that also Singapore Chinese are commonly seen in Little India not only for shopping or as visitors in temples but also as shop vendors, waiters or even owners of Indian restaurants. A Buddhist temple is also located in Little India.

The tour started at Tekka market, the biggest wet market in Little India offering lots of Indian spices, vegetables and fruits (appendix 16). It is estimated that

half of the vendors were of Chinese origin, selling fruits, vegetables and Indian groceries. The guide gave a tour and explained vegetables and fruits used in the Indian cuisine like bitter gourd, bottle gourd, drumstick, ladyfinger, lotus stem, banana leaves, oca, fenugreek leaves, yam amongst others.

Handmade authentic Indian sweets were tasted. She highlighted typical Indian groceries and explained the different kinds of rice available. There was a visit to a Hindu temple and participants learnt about rituals in Hinduism. The tour included facts of Little India's history and a brief introduction into the Indian culture in Singapore.

One of the tour highlights was a visit in the biggest Indian shopping centre in Singapore: Mustafa. It is open 24 hours, 7 days a week and holds a huge range of Indian products from foods, CD's, clothes and other goods. As one of the participants stated:

"Mustafa has everything under the sun." (IP I, line 264)

The tour helped the researcher to become more familiar with the Indian culture in Singapore including some important information on Indian foods and the Indian eating culture. It was a helpful preparation for preparing the interview guide and provided important background information for the interviews.

Cooking with Indian friends and interview partners

Cooking with one interview partner and one Indian friend/neighbour gave good insight into the Indian ways of cooking, especially preparing the individual masalas and teas and learning about authentic Indian cooking utensils like an idli steamer, spice grinder and idiappam press. However, both cooking sessions were very different. The interview partner, a married man, invited the researcher to cook with his wife. We cooked a traditional Indian meal by using fresh products. The cooking process was very clean and tidy and she always made sure the researcher washed her hands before touching something. They practiced Indian rituals while dining, for example that the woman was not sitting at the table and ate later alone in the kitchen. They dished up food even when the researcher explained several times that she was full. The atmosphere during cooking and eating was a bit uncomfortable, even though the researcher knew the couple very well.

Cooking with the Indian neighbour was a completely different experience. She tried to cook some "fancy" Indian food, which was mostly convenient food, ordered by an Indian online supermarket. Therefore, we mostly heated up the

ingredients. The kitchen was very modern and asking her for typical Indian cooking utensils, she told the researcher that she does not use this as she buys most of the groceries packed. We ate together with the husband in a very relaxed atmosphere.

This experience delivered the researcher an insight into two different Indian cooking and dining practices in Singapore. It has to be mentioned, that the cooking “partners” had different social and living backgrounds. The researchers neighbour is a Brahmin coming from Tamil but grew up in the city of Mumbai. While the interview partner was born and brought up on the countryside in Karnataka, he then lived in the city of Bangalore in the last few years before moving to Singapore. He is from a lower caste and explained he comes from a humble background.

Visiting Indian festivals in Singapore with interview partners

Festivals are very important in the Hinduism culture and food plays a major role in most of the festivals.

Although every region in India has its own festivals, only some of them were transferred to Singapore. The major Hindu festivals celebrated in the country are Deepavali and Thaipusam (appendix 16). Deepavali is a public holiday and is celebrated with special events and decoration mainly in Little India. While Deepavali is also a significant festival in India (DUBOIS AND CATT 2002), Thaipusam is less popular in India and centred in the state of Tamil Nadu, while it is a huge festival in Singapore, mainly for Singapore Indians. Visiting the Deepavali celebrations in Little India and joining a typical Deepavali feast in an Indian restaurant was very informative and interview partners were very happy to talk about the rituals and background of the festival. Within the interviews, most interview partners referred to this festival. Hence, it was helpful to have some information and experience in advance.

Concerning the Thaipusam festival, the interview partner knew as little about rituals and traditions of it as the researcher did. Both asked other Indians about festival details or read about it in the guidebook. Celebrations of the festival in Singapore are bigger and more extensive compared to India as they have been expanded over the years and are meanwhile famous worldwide. This festival was not a big issue during the interviews.

Visiting the festivals and learning more about the role of food for festivals was important to have a better understanding and use this during the interviews to ask probing questions.

Exploring the supply of Indian food in Singapore

Visiting Indian supermarkets, discovering diverse places in Singapore, where Indian groceries are sold, ordering groceries from Indian online stores and visiting Indian restaurants provided important information on the Indian food supply in Singapore (appendix 16).

Figure 14 presents places in Singapore, where Indian food is sold. Information is based on results of fieldwork conducted within this study.



Figure 14: Supply of Indian food in Singapore (source: author's own)

Over the years, Indian recipes were modified to different degrees depending to the local available ingredients and other ethnic groups living in Singapore influenced the Indian cuisine (TAN AND CHEONG 2004). Hence, it is not clear if the identified Indian food is authentic Indian or modified food. Information on the range of Indian food in Singapore was helpful to prepare the interview, to understand the participants' statements during the interview and to ask probing questions.

Summary

The activities described were used to analyse the research setting and supported the researcher to become familiar with the Indian food and culture in Singapore. They were important steps for preparing the survey; appraising the participants' answers during the interview, asking probing questions and evaluating the results. Furthermore, the researcher refers to the results within the discussion chapter.

5.2. Preparations

The following steps were completed before conducting the survey:

- becoming aware of wording and questioning
- list with manners and customs to be aware of
- preparing documents and recording devices
- conducting pre-tests

Awareness for the wording of questions

When preparing the interview the wording of questions was of major importance. As PATTON (1990:295) explained: *"The way a question is worded is one of the most important elements determining how the interviewer will respond"*. However, the questions in the guide should *"(...) not be asked verbatim as written"* (LOFLAND AND LOFLAND 1995:85), to make sure the interviewer does not stick too much to the interview guide (FLICK 2009:223). Hence, it is necessary to know about existing kinds of questions and wording within an interview situation. Good questions should be *"open-ended, neutral, singular and clear"*. To allow the interview partners to describe issues elaborately in their own words, dichotomous questions, suggesting simple "yes" or "no" answers should be avoided. Open-ended questions should allow the interview partner to answer without being guided in any direction by the question, e.g. "How satisfied are you with the Indian food range in Singapore?" Presuppositions are another difficulty within interviews. By presupposing facts to the interview partners, the answers might not be completely natural, e.g. "Which food does your family send you from India?" This question does presuppose that the family is sending food. It entails the risk that the participant might name some foods even if the family does not send any foods. Furthermore, each question should contain only one idea and must be formulated clearly. This avoids the participants feeling uncomfortable or

confused. To make sure, questions are clear it is important to learn about common terms used by the participants; this was achieved by talking to Indian friends and other people of Indian origin. However, the researcher learnt a good portion of common terms within the first interviews. Asking questions in a neutral way shows respect to the participants without judging them. This was of major importance, when talking about the Indian caste system, which happens to be a sensitive issue. Finally, using illustrative examples helps for questions failing to produce a response in the first instance (PATTON 1990:295-337). Being aware of these aspects for wording questions was suitable preparation especially for the first interviews.

List with manners and customs to be aware of

Gaining valid and useful data within a cross-cultural setting requires “*sensitivity and respect*” to cultural differences (PATTON 1990:340). Hence conducting an intercultural interview needs additional preparation. Communications skills as well as norms and values concerning the interview situation have to be considered. By joining an intercultural training, studying literature on intercultural communication and talking to Indian friends about these issues, a list of „manners and customs“ to respect during the survey had been generated by the researcher (Table 12). The list was double-checked by Indian friends to make sure the researcher gained the right understanding of each point.

Table 12: Manners and customs to respect within the survey (source: author’s own)

Time boundary	Punctuality is not of major importance for Indians
Shoes	Remove shoes when entering a Indian house or apartment
Reception	Wait till the interview partner shakes hand, otherwise handshake is not common
Physical distance	Especially between different genders, keeping a physical distance is common
The left hand	Never give the left hand to an Indian, it is the “impure” hand
Soft voice	Indians are not used to loud voices, talk soft and calm
Reservation	Excessive gestures are not common in the Indian culture, behave calm and reserved
Nonverbal communication	Indians sometimes move their head to the left and right which is a sign of agreement
The caste system	Asking participants beforehand, if they feel comfortable to talk about the Indian caste system
Beware face	to “beware face” personal as well as intercultural issues might not be told directly by the participants, therefore it is important to listen carefully, look for cues in body language and eye contact

Preparing documents and the tape

Before each interview was conducted, the previous interview had to be copied and deleted from the tape; batteries and the operability of the tape were also checked.

The following documents were prepared and printed out for each interview:

a. Information Letter: Although each interview partner received the letter via Email within the first contact, the letter was handed out again to the participant when meeting for the interview to make sure she/he got major information and contact data of the researcher for further questions (appendix A1).

b. Cover sheet: This paper included the name of the participant, the interview place, date and starting time. For document storage after interviews, it was used as cover page for the other documents of the participant (appendix A3).

c. Questionnaire for socio-demographic data: Filled out at the beginning of the interview for each participant (appendix A4).

d. Interview guide: As the interview guide serves as a checklist and place for notes taken during the interview, for each interview a new guide should be taken (LOFLAND AND LOFLAND 1995:87) (appendix A6).

e. 24 hour dietary recall: filled out during the interview for each participant

f. East Asian Acculturation Measure: filled out at the end of the interview by each participant, or taken home by the participant (appendix A7).

g. Observation guide: filled out at the end of the interview for each participant (appendix A8).

Furthermore, the researcher used a paper with an unstructured list of issues to mention at the beginning of the survey. The same paper was used for every interview as nothing was noted on it during the interviews. The paper is attached as appendix A2.

Conducting Pre-tests

Two pre-tests were conducted with one male and one female participant. These pre-tests allowed identifying potential problems with survey methods e.g. the socio-demographic questionnaire. The interview place was discussed with participants of the pre-tests. Wording of the questions was examined within the pre-test and the researcher tested whether English was suitable as the survey language for the purpose of the study. Cultural misunderstandings could be

identified and the researcher implemented the issues of the list of “manners and customs” within the survey. Furthermore, the pre-tests helped to find out the expected interview time. The interview guide was shortened after the first pre-test, as it was too long and did not allow a reasonable interview time frame.

5.3. Survey design and process

The researcher carried out all of the 24 interviews. The data collection period lasted in total ten months from September 2009 until July 2010.

Place and timeframe of interviews

Hesse-Biber and Leavy described:

“Often, in-depth interviews occur in the researcher’s office or in the respondent’s home, although any private space is suitable as long as both parties feel comfortable.” (HESSE-BIBER AND LEAVY 2010:99)

To make sure the participants felt comfortable during the interview, the interview partners were free to choose the location for the interview themselves, either at their home, at the home of the interviewer or at their office.

The interviews took place as following: Ten interviews were conducted in the researchers’ home, six took place in the participants’ home and for eight interviews, the researcher went to the participants’ office (Figure 15).

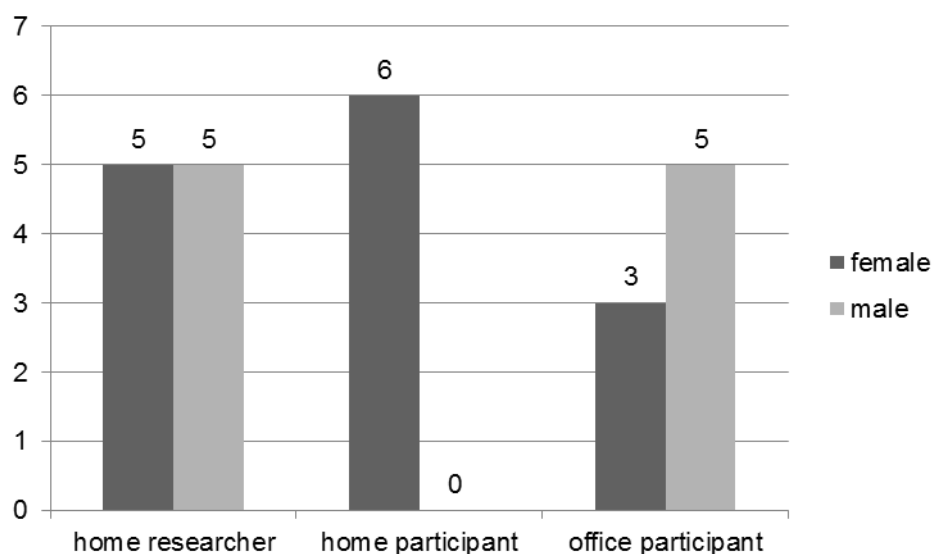


Figure 15: Place of interviews in relation to genders. (source: author’s own)

The interviews lasted between 45 minutes and 1½ hour with an average length of 1 hour and 10 minutes.

Interview language

The interviews were conducted in English. An interpreter was deliberately not consulted, as all interview partners were highly educated and known to have a good command of English, which was clarified within the first contact.

Moreover the study of LEE, NGUYEN AND TSUI (2011) found that interview language is a reliable item to measure acculturation, because it is predominantly objective and “*free from self-assessment bias.*” Therefore, using English as the interview language was considered as acculturation indicator.

Interviews were tape-recorded with permission from the interview partners. Tape recordings allowed the interviewer to concentrate on the participants' information. Therefore, she was not busy with writing down the answers and was less concerned with losing relevant information. Probing and follow-up questions could be planned and were more focused (WITZEL AND REITER 2012:66).

The survey process

The interview was initiated with an introduction, which induced the “getting in” phase. This introduction included the following points as recommended by LOFLAND AND LOFLAND (1995:84):

- Short introduction of the researcher about her background and interest in the researched subject
- Clarifying the purpose of the interview and the topics to be covered
- Informing about the estimated length of time required for the interview and matching time with participant
- Assuring confidentiality in any written report and concerning any information shared
- Explaining that some questions might seem far-fetched or difficult to answer for the participant and that she/he should not worry about giving right or wrong answers, what counts are the opinions of the participants
- Asking participants to feel free to interrupt, ask for clarification or be honest if she/he does not want to talk about a certain topic
- Requesting permission to tape-record the interview and explaining the reason for recording

The researcher used a paper, which included all these points in an unstructured form as a reminder to cover each one.

This introduction phase always ended with the clarification of outstanding questions from the interview partners. Often the participants asked why the researcher is especially interested in Indian food. Some expressed their happiness about the fact that Indians and their eating behaviour were the focus of this study. This was a good topic to start the interview itself. However, if participants did not ask anything by the end of the introduction, the interviewer added small talk about Indian food in Singapore or about Singapore in general to “warm up”.

After that, the short questionnaire on socio-demographic data was retrieved and filled out by the researcher.

WITZEL AND REITER (2012:92) recommended conducting the short questionnaire before starting the interview. In contrary FLICK (2009:212) suggested to use it at the end of the interview to make sure that the question-answer structure of the questionnaire does not influence the flexibility of the interview. PATTON (1990) made the same recommendation. He argued:

“Background and demographic questions are basically boring; they epitomize what people don’t like about interviews.” (PATTON 1990:295)

He recommended asking some short background questions in the beginning if they are necessary and to place socio-demographic questions at the end. Within the pre-test interviews, the short questionnaire was conducted after the main interview. The experience was not positive when this was done with the pre-test participants. Both participants were confused about why they were asked such, in their opinion, “basic and important” questions at the end. Furthermore, it transpired that some of the information was of great importance requiring follow-up. Due to the application of further methods (East Asian Acculturation Measure, 24-hour dietary recall) splitting the short questionnaire into two parts to ask important questions in the beginning and put the second part at the end, would have led to a confusing survey design. Hence, for further interviews the questionnaire was used before starting the main interview.

PATTON (1990:294) recommended starting the interview with a question that is easy to answer. Therefore, the interview commonly started by asking: “How did your eating behaviour change since you lived in Singapore?” or, depending on the situation, with the question: “Why did you move to Singapore?” Both questions allowed the interview partners to describe situations or behaviours in a straightforward manner and therefore served as good “starting questions”.

They were mostly followed by probing questions to get a comprehensive understanding of the described issue. As the interviews progressed, the participants' answers ideally shaped the follow-up questions. The interview guide was used for orientation or when the interview stagnated. Types of questions asked were mainly experiential, behaviour questions like "Which food did you consume on a normal day in India?" opinion, value questions like "What do you think about your life in Singapore?" and feeling questions like "How would you feel after three days without having the opportunity to eat Indian food?" Knowledge questions have been avoided.

The 24-hour dietary recall was filled out at a non-fixed point of time during the interview either when it referred to the actual discussed topic or when the situation allowed a break. For example, when the participant just described how a typical eating day looks like for him or her in Singapore, the researcher asked the participant at the end of this theme to fill out the 24-hour recall. The interview was suspended during that time. While participants filled out the recall, the researcher used this time to check the questionnaire and status of interview, e.g. which questions were asked, which questions are still missing, are there any misunderstandings of already given answers or themes. Using headwords from the interview guide helped the researcher refrain from relying too much on the guide within the interview. The interview break given by the 24-hour dietary recall supported the researcher to prevent the risk of forgetting the interview guidelines as HOPF (1978) has warned of.

The participants filled out the EAAM directly after the interview or they took the questionnaire home and sent it back to the interviewer later.

The time after the interview is of major importance for the rigor of data quality. Immediately after the interview the tape was checked to make sure it functioned properly (PATTON 1990:352-353). The observation guide was filled out and unclear information which came up while reconsidering the interview were clarified via Email, phone call or a second meeting with the participant, which was mostly informal and not set up as another interview situation. By reflecting on the interview, wording and content of questions were scrutinized and when indicated, altered for the next interview. For example, the first interviews showed that even if some participants practised Ayurveda based eating styles, they were not aware of the term Ayurveda in this context. Hence, questions relating to this topic were worded differently. Another example is the use of the term "meat". The first interviews showed that participants preferred to use the term "non-veg" (non-vegetarian) and some did not vocalize "meat" at all. Therefore, the wording was changed for the upcoming interviews.

6. DATA ANALYSIS

The methodological framework for the data analysis is shown in Figure 16. The process of data analysis started with organising and preparing the data to allow for a structured analyse. Single steps will be explained within the following subchapters. At the end of this chapter, there are explanations about how the data from the different instruments were merged and interrelated to get a comprehensive overview of the results.

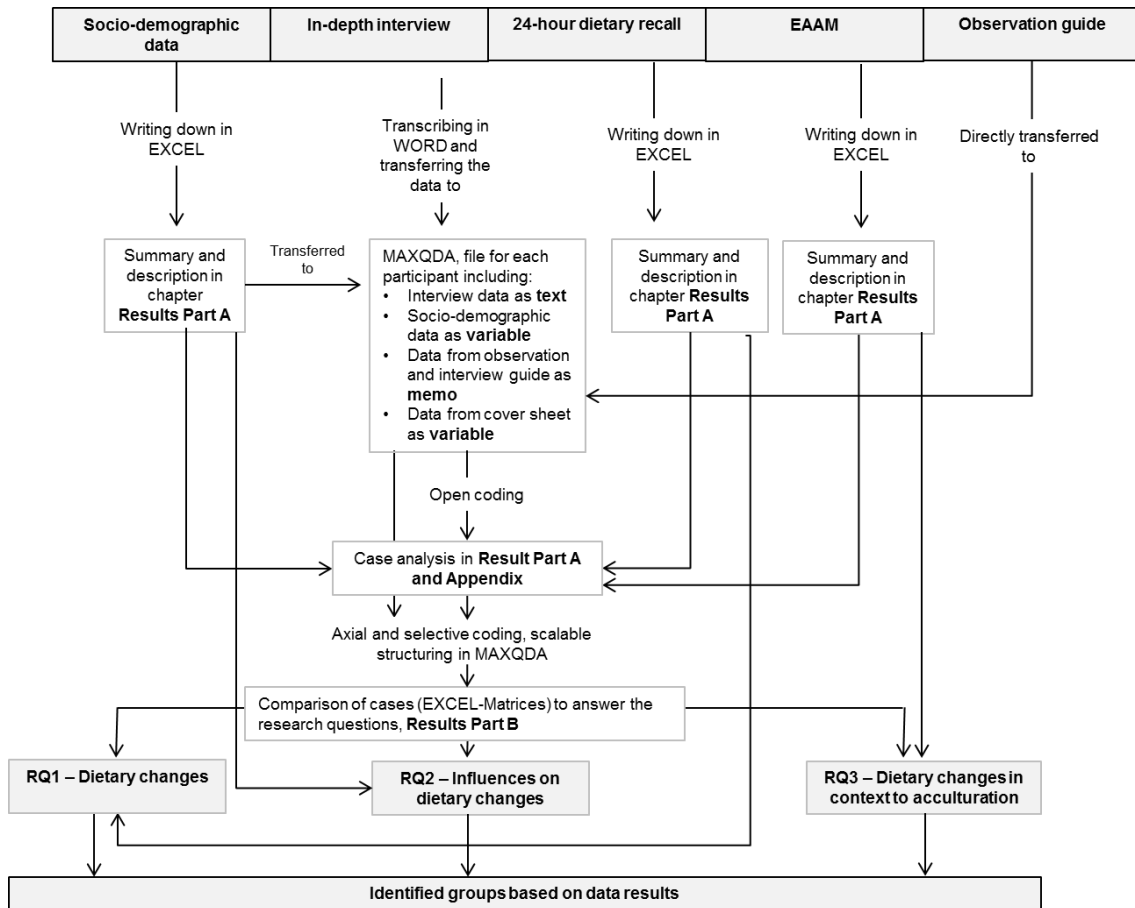


Figure 16: Methodological framework for data analysis (source: author's own)

6.1. Organisation and preparation of data

Storing and saving data

All data available in written form including data from the EAAM, 24-hour dietary recall, socio-demographic data, cover sheet and the interview guide with field notes were scanned and stored as files. The 24 interviews were stored in audio-files as backup. The socio-demographic data, as well as data from the 24-hour dietary recall and from the EAAM, were transferred to EXCEL and arranged in tables.

Transcribing the interviews

The interviews were transcribed verbatim by using the software WORD and the program F4. This program allows setting time markers within the transcribed text, which makes it easier to find an important statement later on and hear it again (DRESING, PEHL AND SCHMIEDER 2013). Transcribing was done with defined transcribing rules, to make sure every piece of information was captured and to allow “reading between the lines” when analysing the data. The list of “Transcribing rules” is attached as appendix A9. Transcribed interviews were stored as rtf files.

MAXQDA

The transcribed interviews were reviewed twice for reviewing a match with the spoken interview and for spell check. After this processes the interviews were transferred into the software MAXQDA. This software tool allows administrating interview data together with data from other information sources and to analyse it all with a favoured method. MAXQDA does not pretend to use a specific analysing method; rather, it simplifies data analysis by allowing a computer-assisted approach and for researchers to work more efficiently (KUCKARTZ 2010:11-13). For each participant a document was compiled including the transcribed interview and further data as described below.

Data from the observation guide as well as field notes from the interview guide were directly transferred to MAXQDA and linked to the participants’ transcripts as document memos. Data from the cover sheets were also linked to the participants in form of variables.

Socio-demographic data were as a first step analysed in EXCEL and then transferred to MAXQDA and linked to each participant as variables.

At a glance, each participant’s document in MAXQDA included the transcribed interview data, socio-demographic data and data from the cover sheet in the form of variables; data from the observation guide and field notes from the interview guide were collated in the form of a document memo.

6.2. Socio-demographic questionnaire, 24-hour dietary recall, observation guide, interview

Socio-demographic Questionnaire

Socio-demographic data had been listed within a detailed table using EXCEL. These results are attached in appendix A10. Results were summarized in the

form of a table and explained in detail. Some socio-demographic information was also included within the case analyses, which helped to characterize the participants. Furthermore, socio-demographic data has been used to identify influences to dietary changes of the Indian migrants.

24-hour dietary recall

Results of the 24-hour dietary recall had been transferred from the questionnaire into an EXCEL table. Data were analysed and described based on the meals breakfast, lunch, dinner and snacks.

To make these results more comparable, the data of each participant were also listed within the case analyses. This allows comparing of the recall information directly with the statement of each participant concerning his or her eating habits in Singapore.

Observation guide

Data of the observations were transferred directly to MAXQDA. The information was categorized to the respective participant as a document memo and information relevant to the results was noted in the case analyses.

Interview results

To analyse the interview data an exploratory, content-driven, approach was used. Although an interview guide was used during the interview, the researcher decided, not to analyse data based on the topics in the guide. Instead, categories had been derived inductively from the interview data. This made sure that issues, which were not included within the interview guide, were captured and analysed as well. Categories were identified by open, axial and selective coding as recommended by STRAUSS AND CORBIN (1990). They described coding as the process by which “data are broken down, conceptualized, and put back together in new ways.” (STRAUSS AND CORBIN 1990:57) This process is determined by two main steps, which are a) making of comparisons and b) asking questions. Coding was done within the tool MAXQDA, which allowed for coding of the text in different colours and to organise codes and later categories in a meaningful way, again classified to each participant. The tool helped to organise and reorganise data in a convenient way and hence to save time.

Within this study the three steps named by Strauss and Corbin (1990) were supported by a further step – writing case analyses. The steps were based on each other. Data from the open coding provided the content for the case analyses, while the latter supported the next step of axial coding. The four major steps used for data analysing, are described as following:

A. Open coding

Open coding started by identifying and labelling phenomena. The interview text was read line by line and phenomena were identified by asking questions about each incident like “What is it?”, “When does it occur?”, “Where does it occur?”, “Why does it occur?”, “How does it occur?”, “With what consequence does it occur?” (SCOTT AND HOWELL 2008). After identifying and labelling the phenomena, categories were discovered. The process of categorizing was done by checking which codes can be grouped within one category. Each phenomena grouped in one category were named by considering that each name had to be abstract and at the same meaningful to make sure the researcher will remember it and think about it (STRAUSS AND CORBIN 1990:65). Table 13 provides an example for the category “Meat eating”.

Table 13: Results for the category “Meat eating” for three interview partners (source: author’s own)

Interview Partner (IP)	Coded text sequences for the category “Meat eating”
IP a, line 166	“so sometimes I, I feel like I have been eaten to much of meat and then I go...ah I take mainly like maybe 3 portions of vegetables, no meat maybe I just take egg so I do this for one week in between and then I go back to the same thing.”
IP a, line 112	“No, no, no not full on vegetarian.”
IP b, line 114	“yeah, so non veg... I take very less non veg, basically only three times a day [probably means a week] something like that that’s all”
IP b, line 118	“chicken, fish and ah meat...lamb, lamb or goat or whatever ... sheep”
IP c, line 73	“I am a vegetarian so I don’t eat meat on a regular basis as such”
IP c, line 75	“No meat, no meat. So no chicken, no poultry, no fish, no seafood”

B. Case analysis

After the open coding was done, a case analysis was written for each interview partner. Each case analysis starts with a typical statement of the participant. As the research questions of this study mainly refer to dietary acculturation, typical statements were chosen that suggest the participants’ relation to food or eating.

The typical statement is followed by an overview in form of a table presenting socio-demographic data, a summary of important information related to the research questions, results of the 24-hour dietary recall and results of the EAAM of the participant. After this table, the case is described by giving a summary of the significant topics discussed within the interview. While analysing the interviews, headings were identified to classify the case analysis in a meaningful and chronological form as following:

- General information about life in India
- Eating habits in India
- The relocation
- General information about life in Singapore
- Eating habits in Singapore

Data results from the open coding were then categorized to the referring headings. The list of codes included in the case analysis is attached as appendix A12.

C. Axial coding

Writing the case analysis provided a comprehensive overview of each case by showing connections of diverse phenomena and was therefore a supporting tool for the followed step of axial coding. However as the case analysis provide a summary of the interviews; axial coding was done based on the original interview data. By refining, differentiating and making connections, the categories were putt together in new ways. To simplify the process of axial coding, the categories were specified based on the paradigm of STRAUSS AND CORBIN (1990:99). It allowed the researcher to relate data in complex ways and link subcategories to major categories in “a set of relationships denoting causal conditions, phenomenon, context, intervening conditions, action/interactional strategies, and consequences.” Figure 17 provides an example of the paradigm used for the category “eating meat in general” and identified subcategories.

For this example the causal condition, which leads to the development of the phenomenon “Meat eating”, are the subcategories “Moving to Singapore”, “Household composition” and “Variety, taste and availability of vegetarian food in Singapore”. The context is the location and the set of conditions in which

strategies are taking place. In this example, it is “Increased meat intake in Singapore”. Intervening conditions are entailing action or interactional strategies. “Time/Working hours” is an intervening condition as it affects the participants time frame for “Cooking at home”, the action strategy to reduce the meat intake. Reduced “Temple visits in Singapore” are a consequence to the increased meat intake in Singapore. By using this paradigm, relationships between categories were analysed and subcategories were related to categories.

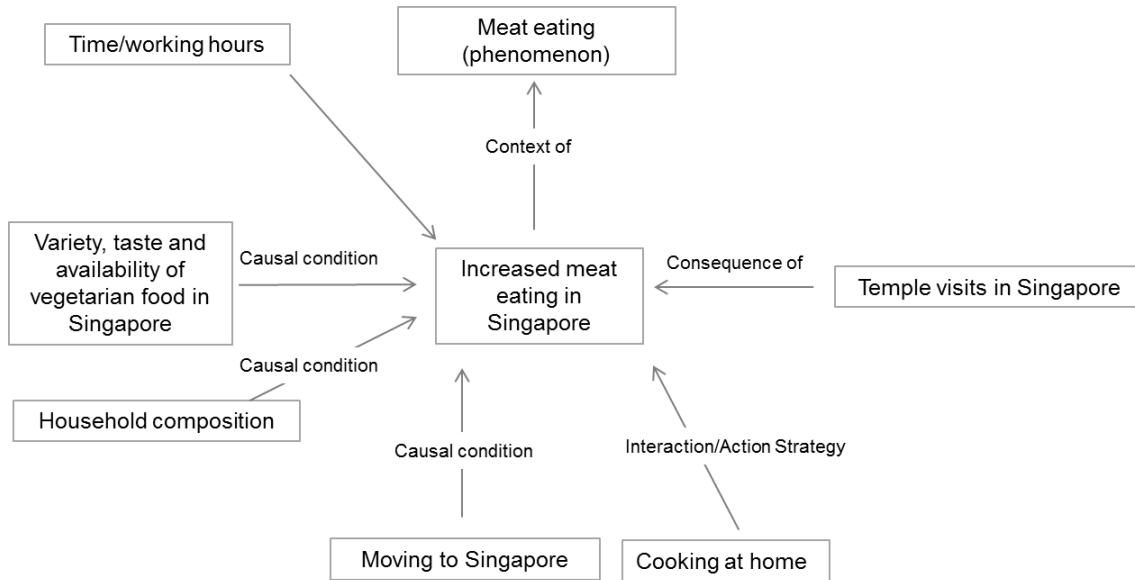


Figure 17: Paradigm Model using the example of the category “Meat eating in general”
(source: modified from STRAUSS AND CORBIN 1990)

D. Selective Coding

STRAUSS AND CORBIN (1990:116) described selective coding as the process of finding the core category of the research to which all other categories are integrated. Identifying the core category helps to determine the final theory of the study. According to their theory, this step should be done inductively. In this study three major research questions had been examined. Topics and issues of the interview guide were related to the research questions hence a predominant part of identified categories referred to the research questions as well. Consequently, a major part of categories identified through axial coding had been integrated into the three core categories „Dietary acculturation” (referring to RQ1), “Affecting Factors” (referring to RQ2) and “Acculturation Indicator” (referring to RQ3). Therefore, this part of selective coding was done in a deductive step. However, the intention was to use the data collecting method of semi-structured interviewing and the data-analysing method of open coding to

allow participants to speak in their own words intensively about the topics and to enable the researcher to analyse other issues that were not related directly to the research questions. Those categories were integrated into the core categories “Indian Culture”, “Indian Food” and “Others”. Here, the core categories were identified in an inductive step. Other than recommended by Strauss and Corbin, this study has six instead of one core category

Processing data of the core categories

For quantifying the identified dietary changes, the method of “*scalable structuring*” by MAYRING (2008:92-99) had been modified for the purpose of this study. The aim of this method is to estimate data on a scale. This study did not use a scale but generated data based values to classify findings. The steps are explained in appendix A34 using the example of dietary changes for breakfast. The process was done in MAXQDA. Identified and determined values had been integrated to MAXQDA as categorical variables and related to the merging codes. Classifying the data in MAXQDA allowed compiling a matrix and to then shift this to EXCEL for further processing. Findings could be visualized clearly in the form of tables, graphs or charts by exporting the data to EXCEL and processing them in the desired form. Findings were underlined with statements from the interview partners to receive a comprehensive description.

Data from the core category “Affecting Factors” and “Acculturation Aspects” were related to the dietary changes by compiling matrixes to identify relationships.

Information of the core category “Indian culture” was partly integrated into the “Theoretical framework” (please refer to chapter II 5.3). Results of the core category “Indian Food” are partly listed in appendix A33. Only the foods mentioned in the case analysis or the result chapter were explained in appendix A13, as the full range of food explanations given during the interviews was outside the scope of this research. Data from the core category “Others” provided supporting information for data analysis.

6.3. Analysis of the East Asian Acculturation Measure and single aspects to measure acculturation

East Asian Acculturation Measure

Data from the EAAM has been analysed in EXCEL. Details are described in subchapter IV 3.2. To make these results more comparable, the results for each participant were also listed within the case analyses.

Cultural and psychological aspects of the acculturation process

Aspects related to Table 8 have been identified during the process of coding and were classified within the core category “Acculturation aspects”.

Results from the EAAM and the cultural and psychological aspects of the acculturation process were organised in a matrix together with the dietary changes and affecting factors in order to identify interrelations.

6.4. Merging and interrelating the data results - Transferring data into the context of the research questions

Data results were shown in “Results Part A” as a summary of the raw data based on the used instruments. In order to answer the research questions and to get a comprehensive understanding of the single data, all results were merged and related to the research questions as shown in Table 14. Observation data were merged already with the interview data in MAXQDA and are integrated in the entire results without special recognition.

Table 14: Merging and interrelating data (source: author’s own)

RQ1	RQ2	RQ3
Data from Core Category „Dietary acculturation”, data from 24-hour dietary recall	Relating results from RQ1 to data from Core Category “Affecting Factors”, Socio-demographic data	Relating results from RQ1 to data from “Acculturation Aspects” and EAAM

Merging and interrelating data results allowed answering the research questions as shown in the in chapter IV Results Part B.

To answer the first research question (RQ1) on dietary changes of first generation Indian migrants, results from the core category „Dietary acculturation” were analysed and set into relation to the results of the 24-hour dietary recall. For a better overview and structure, results were clustered to three leading aspects of the dietary acculturation process as following:

- Dietary acculturation in daily meals
- Purchasing food: From wet markets, online shops and mother’s handmade spices
- Traditional eating habits

The second research question (RQ2) was answered by relating results of RQ1 to results summarized within the core category “Affecting Factors”. Based on the proposed model of dietary acculturation from SATIA-ABOUTA (2003) the

affecting factors have been classified into different clusters, which included the socio-demographic data (please read chapter II 2.1 for further information about the model).

MILES AND HUBERMAN (1994:148) recommended linking data to each other by using matrices. Several matrices were generated in this study to identify, which factors affected the migrants' dietary changes. Matrices were compiled by choosing the needed variables and codes in MAXQDA then exporting them in the required layout to EXCEL for further processing.

Results from RQ1 were related to data of the core category "Acculturation Aspects" and the EAAM to examine research question 3 (RQ3). This step was preceded in the same way as generating the matrices for RQ2.

Data from result chapters IV 5 to IV 7 allowed a concentration of results to identify the general context of eating habits, affecting factors and the overall acculturation process of Indian migrants. Data concentration was undertaken by generating groups based on the migrants' household composition and working hours. These groups are described in results chapter 8 – "Identified groups based data results".

7. TRUSTWORTHINESS – VALIDATION OF QUALITATIVE RESEARCH

Reliability, validity, generalizability and objectivity are significant requests in quantitative research. In qualitative research, these aspects are diffuse. There is no consistent approach for quality assurance in qualitative research.

MILES AND HUBERMAN (1994:294) elucidated that, without taking care of the *"issue of goodness criteria in your study, you are on shaky intellectual ground."* They suggested assessing the quality of a study by asking questions on the studies conformability, dependability, credibility and potential transferability. In the following, these four aspects will be related to this study.

Conformability

This aspect is focused on the objectivity of the analysis, results and conclusions, making sure they are predicated on the research rather than the researcher (LINCOLN 1985:299-300).

PATTON (1990:200) explained to this

“What people ‘see’ is highly dependent on their interests, biases, and backgrounds. Our culture tells us what to see; our early childhood socialisation instructs us in how to look at the world; and our value systems tell us how to interpret what passes before our eyes.”

Considering these issues, it is of major importance for a qualitative researcher to be self-aware of personal assumptions, values and bias. In this thesis, an emphasis was placed on extensive theoretical study of the Indian culture in India as well as in Singapore. This allowed the researcher to get a comprehensive understanding of the cultural focus in an Indian's daily life and to eliminate personal assumptions (e.g. “All Indians avoid eating beef”, “Hindus visit temples on regular basis and they do not eat the food offerings”, “Indian men will not cook” etc.). Furthermore, discussing the Indian culture, personal assumptions and different values of both cultures – the Indian and the German – with Indian friends as well as with Hindu priests, helped to prepare the interviews and to analyse the data as objectively as possible in a naturalistic approach. One result of these discussions is the list of “Manners and customs to respect within the survey” [please refer to chapter III 5.2 in this thesis], which helped to avoid cultural misunderstandings during and before the interview. To receive objective results and conclusions MILES AND HUBERMAN (1994:278) recommend among others, to verify if the methods and the data collecting process are described in enough detail and that the conclusions are linked explicatively to the data. To ensure these aspects, Indian and German outsiders, who were not familiar with the subject, have read parts of the thesis. Discussing their understandings of the theses helped the researcher to formulate the text in an understandable way and remove identified misunderstandings. Furthermore, the raw data of this will be available to the interested public for reanalysis (MILES AND HUBERMAN 1994:278).

Dependability

The major issue of this aspect is controlling if the study process is reliable and stable over different researchers and methods. Considering this aspect, it is important that the research questions are very clear and are congruent with features of the study design. Also describing and clarifying the researcher's role is crucial. Checking findings on parallelism across different data sources is also recommended (MILES AND HUBERMAN 1994:278).

In this study, research questions have been formulated and described clearly. They were related to the methods used for data collection and data analysis.

The researcher's role in this study is characterized in chapter III 8. Findings of dietary changes identified in the interview data were compared to the results of the 24-hour dietary recall to verify parallels within the data.

Results of the EAAM were compared within acculturation-related results identified within the interview data for verifying. Furthermore, to frame reliable results and conclusions, methods for data collection and analysis were described in detail to make sure other researchers can reproduce the process.

HELFFERICH (2009:155) stated that narratives in qualitative research are context-dependent and they will never be the same when repeating the interview. Therefore, results have to be viewed as context-sensitive.

Credibility

The leading question of this aspect is about the truth-value of the findings. Triangulation of methods is recommended to validate data (MILES AND HUBERMAN 1994:278). The intention in this study was to use two methods of data collection for each research question, to compare the results and check for parallels. The relation of methods to the research questions is shown in Table 7. Furthermore, results were discussed with Indian friends on regular basis. Especially doubtable or undermined interview statements were clarified with interview partners later by phone or an appointment to avoid misinterpretations.

Transferability

Here the question of "generalization" comes into focus (MILES AND HUBERMAN 1994:279). According to HELFFERICH (2009:155) qualitative data is context-sensitive and therefore it can hardly be generalized. However, some aspects can be considered to provide transferable data. In this study the persons, settings and process of sampling were described in detail (MILES AND HUBERMAN 1994:279). The employed methods and the research setting as well as findings have been explicitly explained. These aspects allow the readers to decide about transferability.

8. EXCURS: INVESTIGATORS RELATIONSHIP TO THE SETTING - OVERCOMING CULTURAL GAPS

Living in Singapore as a German brought myself in-between what LOFLAND AND LOFLAND (1995:37) called a *“participant researcher role”* and a *“outside researcher role”*.

I was a participant researcher, because I shared with the Indian interview partners being a foreigner in Singapore, who was staying away from their home country, friends and family. Likewise, as a German I was not used to the numerous regulations, which guide the daily life in Singapore, like the prohibition to eat on several places in public or the advised walking directions in train stations. Restrictions and prohibitions are very common in Singapore and are something foreigners from a less restricted country have to get used to.

I shared with most of my interview partners the respect of the cleanliness in the island state, which is of a very high standard and which we all enjoyed. In addition, the peaceful life in Singapore, with a minimum of crime compared to our home countries, was something we appreciated. Most participants had left India for the first time and for a longer period, something we also had in common. Hence, I could empathise with their feelings and the problems they faced in their first month in Singapore like searching for an apartment, getting orientated in the city and making social contacts. Having this experience in common was a good point to “warm up” with the participants at the beginning of the interview. It was also often helpful during the interviews when the participants seemed uncomfortable talking about their experiences in Singapore or about their feelings during their first weeks in Singapore. I was able to confirm, that I had similar experiences, which mostly relaxed the situation.

However, coming from a Western and individualistic (FERNANDEZ ET AL. 1997) country also brought some different experiences, comparing to the participants who came from an Asian and partly collectivist culture (SINHA ET AL. 2001). I experienced a high acceptance among Singaporeans in general and found them very helpful, friendly and hearty. While some of my interview partners found Singaporeans more reserved, rarely smiling and sometimes even unfriendly. Considering social contacts, I was much more eager to get in contact with people from other countries than Germany. Even though there is a German community and quite a few German or Western occasions and places to meet, I preferred exploring more authentic Singaporean places and people. On the contrary, my interview partners preferred to gather with Indians and were much more eager to keep their traditions and habits. Nevertheless, I found them very

open minded to explore interesting touristic or nature attractions in Singapore and to visit occasions and festivals from other religions and nations. During the interviews sometimes, I felt there was a point, where most of them stopped talking honestly to me about their impressions and experiences of their life in Singapore. As if they were not sure if they can talk to me honestly about their negative opinion and experiences in the country. That was when I felt the “cultural gap” and at the same time, I felt, that it would not make sense to ask more detailed questions in these situations.

Interviews with the Indian women were mostly very relaxed. They showed a good portion of humour and were curious about my life, culture and diet. That made warming up with my female interview partners mostly quite easy and with most of them I am still in contact. Interviewing Indian men was sometimes a challenge. I would say there were two groups of Indian men. One group, luckily the majority, was as easy to get along with as the female participants were. They were very talkative, open minded, humorous and relaxed. The other group of male interview partners was quite reserved. They did not seem to feel comfortable with eye contact while talking. Some of them gave short answers and seemed not to be interested very much in talking about food. Overall many interview partners were very happy, that I am interested in the diet of Indian migrants and some even were thankful for this.

Even with my Indian friends and acquaintance, there were some themes, which were hard to understand as a non-Indian. However, keeping an open mind and accepting other values and attitudes was the most important issue not only concerning the survey but also concerning my life in Singapore in total

Concerning the dietary changes, my interview partners mentioned, I had quite a few points in common with them. That made it easy to understand their aspects and easy to talk about. I also started to eat fast food in Singapore, even though I very rarely ate it in Germany. In the beginning, I did not know the foods in the hawker centre or the foods seemed to be “alien” to me, e.g. pork organs or fish head. Fast food was available in every shopping mall and every touristic place, so it was the easiest way to choose it. I also changed my breakfast eating habits from eating wholemeal German bread to toast or cereals. That was again due to less availability of German bread. While eating much more fish, soya products and fresh fruits and drinking fresh fruit juices after the first few weeks and by then reducing the fast food intake, my diet got more healthier compared to my diet in Germany. I found myself eating out more due to numerous options. In addition, the climate was very hot, which made cooking at home inconvenient and I could not find most of the “German” ingredients anyway. I could have

travelled to the “German supermarket” but this was far away and very expensive. Concerning meat, I reduced my intake a lot due to the lesser quality of meat in Singapore.

At a glance, I practiced quite a few of the dietary modifications of my interview partners and sometimes for the same reasons. Furthermore, I am personally very interested in the Indian culture and love Indian food. In general I find Indian people very gentle, humorous, open minded and easy to get along with. These aspects disburdened the cultural gap and in the predominant part of my interviews, the different culture of my interview partners and me provided a positive variable rather than a gap.

IV RESULTS

Results have been classified into two major parts. Results Part A present data resulted from the single methods: socio-demographic questionnaire, 24-hour dietary recall and from the EAAM. Furthermore, these results were integrated in a case analysis for each participant, together with information from the interviews. Four characteristic case analyses are presented in this chapter. The remaining 20 cases analyses are described in appendix A13 to A32.

Results Part B refers to the research questions. In this Part, data was interrelated and merged with the intention of answering the research questions.

RESULTS PART A – SUMMARY OF RAW DATA

1. SOCIO-DEMOGRAPHIC INFORMATION

Table 15 provides an overview of the socio-demographic data of the 24 Indian migrants who participated in this study. Details are explained in the following.

Table 15: Results of socio-demographic data (source: author's own)

	N = 24
Gender	
Male	10
Female	14
Home state	
Kerala	3
Tamil Nadu	12
Karnataka	7
Andhra Pradesh	1
Bombay	1
Age	
20 to 30 years old	12
31 to 40	9
41 to 50	3
Marital status	
Married	15
Single	9
Household composition	
Living together with family (spouse, grandparents, children)	13
Living together with Indian flat mates	11
Living with children	
Yes	10
No	14

IV RESULTS

How many children	n = 10
1 child	2
2 children	8
Age of children	n = 18
0 to 5 years old	5
6 to 10	7
11 to 15	4
16 to 20	1
Older than 20	1
Years since living in Singapore	
1 to 2	4
3 to 6	11
7 to 10	3
More than 10 years	6
Years of school education	
7 to 10	1
More than 10	23
Educational achievement	
Master	10
Bachelor	12
Diploma	1
MBA	1
Profession	
Engineer / SW-Engineer	15
IT worker	1
Housewife	2
Writer	1
Designing company	1
PhD student	2
Teacher working as an artist	1
Social commitment (UNICEF)	1
Working hours per day in average	
Less than 5	4
5 to 7	3
8 to 10	10
More than 10	5
No information	2
Religion	
Hindu	22
Christian	2

Of the 24 participants, ten are men and 14 are woman. Most of the interview partners come from Tamil Nadu (n=12), while the home state of seven participants is Karnataka and three were born and grew up in Kerala. Andhra Pradesh is the hometown of one man. One participant is from Mumbai.

The majority of participants are between 20 and 30 years old (n=12). Nine of them are between 31 and 40 years old and only three are 41 years or older. The youngest participant is 20, the oldest is 47 years old.

Married participants make up the majority at 15. Further nine participants are single.

Twelve of the married participants live together with their family. Two of them live together with Indian flatmates at the time of the interview as their wives were temporarily in India to give birth. Before this, both of them lived together with their wives. One of the married participants was a newlywed. She currently stays with another Indian family and waits for her husband to find a job in Singapore, then they will move in together. Of the single participants, six live together with flat mates. Two interview partners stay in a rented room within an apartment of another Indian family who were considered as flat mates in this study. One woman lives with her grandparents.

Ten participants live together with children. Eight of them have two children, while two of them have one child. Most of the children are between six and ten years old ($n=8$). There are five children who are between the ages of zero to five years and four children between eleven to 15 years. Only one child is between 16 to 20 years and one is older than 20 years.

With $n=11$ the vast majority of participants have lived in Singapore for three to six years. Six interview partners have lived there for more than ten years. Four of them moved to Singapore one to two years before the interview was conducted. Only three of them have lived there for seven to ten years.

Twenty-three participants went to school for more than ten years. Only one of them left school earlier to work and continued school later in his mid-20s.

Half of the interview partners attained a bachelor's degree ($n=12$); ten have a master's degree ($n=10$). One holds a diploma and another one a MBA.

Fifteen participants are Engineers or Software-Engineers. One of them stated that her profession is Software-Engineer but she actually works as a nutritional consultant. One is employed in the IT sector as a skilled employee. Another two are exclusively housewives. Furthermore, six women work from home for some hours per day each in a different job either as a writer, as designer for jewellery, a PhD student ($n=2$), artist and one does voluntary work.

Most of the interview partners work between eight and ten hours ($n=10$). Five of them work more than ten hours per day. The two housewives did not give any information concerning their working hours. Four participants work less than five hours per day and three worked five to seven hours daily.

Hinduism is the religion of 22 participants, while two of them are Christian.

2. FOOD INTAKE ON THE BASIS OF THE 24-HOUR DIETARY RECALLS

Twenty-three participants filled out the 24-hour dietary recall. One participant did not feel comfortable filling out the questionnaire and explained that he could not remember what he ate the day before.

Within the recall, there was a column for “serving size”. These data were not assumed in the results as the predominant part of participants did not fill out this column and accordingly it was not significant for the analysis. In the following, the results are explained in detail categorized into breakfast, lunch, dinner and snacks.

Breakfast

One participant skipped breakfast. The 22 participants, who took breakfast, consumed this between 7.15 and 10 am. The core time for eating breakfast was between 8 am and 9 am (n = 16). One participant did not give any information about his breakfast time. Two participants had Indian tea soon after getting up and ate breakfast 1 to 1.5 h later.

Concerning the place of eating, 17 participants ate their breakfast at home; five participants had it outside. Out of this five, three of them ate at a food court close to their office, one bought the food and ate it at home (curry puffs and orange juice) and one bought some biscuits and ate them at the office.

As shown in Table 16, thirteen participants categorized their breakfast food items in the dietary recall as “Indian”, while seven beverages were described in this category.

Table 16: Breakfast: food and drinks classified as “Indian” in the 24 h dietary recall
(source: author’s own)

breakfast (multiple answers)	
food	drink
vada	chocolate malt
bread (2 times)	Milo
poori with potato	coffee
puffed rice	Indian tea with sugar
upma (2 times)	chai Tea
idlis	tea (masala)
dosa	barley water
oats with pears and walnuts	
brown rice flakes	
pongali, tomato onion curry	
cookies, biscuits	
rice, spinach curry, bean sprouts	

Eight participants specified their breakfast food items as “Western”, one drink was pronounced in this category. The “Western” items are listed in Table 17.

Table 17: Breakfast: food and drinks classified as “Western” in the 24 h dietary recall
(source: author’s own)

breakfast (multiple answers)	
food	drink
bread toast	tea
breakfast cereals (2 times)	
cereals	
bread , jam	
brown whole meal bread with strawberry jam	
oats with pears and walnuts	
white bread	
toast with butter	

The tea was placed as “Western” by the participants as he explained it was prepared with a tea bag and not with traditional Indian tea. The “oats with pears and walnuts” were classified as Western and Indian as the participant was not sure about the correct classifying. That is why there are 23 classifying in total but only 22 participants wrote down their breakfast food and drinks.

One participant described dosa as “Other Asian food” because it did not have an authentic India taste and he called it “Singapore style”. Another participant had curry puffs and orange for breakfast, which he ranked as “Other Asian food”.

Lunch

Lunch was consumed between 12 pm and 2.30 pm with a main lunchtime between 12 pm and 12.30 pm (n = 12). Two participants did not give any information about their lunchtime.

Eleven participants ate homemade food for lunch. Four of them took the homemade food to their office and had it there, while the other seven ate their lunch at home. Ten participants ate food from outside the home for lunch. One participant consumed fruits for lunch at home and another one did not give any information about the place where he ate lunch.

It can be seen from Table 18 that 19 participants categorized the food they ate for lunch as "Indian". No drinks were classified in this category.

Table 18: Lunch: food classified as "Indian" in the 24 h dietary recall (source: author's own)

lunch (multiple answers)

kansama (buffet lunch), North Indian food with lots of varieties
 rice, yoghurt
 rice, curry, cabbage
 rice with potato, cabbage, curd
 salad, beans, curry, rice, yoghurt
 rice, sambar, potato curry, carrot curry, yoghurt
 rice with sambar and rasam, vegetables and pappadam
 red rice, curry, cabbage stir fried, yoghurt
 naan set meal
 chapatis, vegetables
 rice, sambar, vegetables
 rice with egg curry
 chapatis, dal, beans curry
 rice, vegetables, curry (sambar, rasam), curd, papad
 rice, dal, curry, potato fry, curd, papad
 paratha with vegetable and yoghurt
 roti, fruits
 brinjal curry, rice, [omelette categorized as "Western food"]
 rice, spinach curry, bean sprouts

Western food was specified only once for lunch which was pasta and salad. The participant who had brinjal curry with rice described the omelette she consumed within this meal as "Western food".

One participant consumed a vegetarian biryani for lunch and termed this as „Other Asian food“. He explained that he did this classifying because the biryani did not have an authentic Indian taste.

Another participant ate a typical Singaporean set lunch at a food court and classified this as “Other Asian food”.

For one lunch, no classification was made because the participant ate just watermelon and was not sure where the fruit came from.

Concerning drinks, once water was consumed together with the lunch and was classified as “Other Asian Food” and another participant consumed a coke at lunchtime, which he categorized as “Western Food”.

Dinner

Dinner was consumed between 5.30 pm and 10.30 pm. Most participants ate between 7.30 pm and 10 pm (n=18). Two participants did not give any information about their dinnertime.

Twenty participants ate homemade food for dinner. One bought some snacks and ate these at home. While another two stated that they ate dinner outside. Table 19 illustrated that 19 participants had Indian food for dinner. Only one drink was specified as “Indian” for dinner, which was milk.

Table 19: Dinner: food and drinks classified as “Indian” in the 24 h dietary recall (source: author’s own)

dinner (multiple answers)	
food	drink
puligare (mixture of rice with spicy masala)	Milk
curry nan	
salad, beans curry, rice	
lemon rice	
rice pancake (dosa) with onion and egg	
chapati, cabbage stir fry, salad, yoghurt	
rice, vegetables	
rice, curry, veg / non veg	
chapatis, vegetables	
puri, cottage cheese (paneer) in tomato gravy	
chapatis, chickpeas curry	
dosa	
gourd soup (pumpkin), dosa	
idli, sambar	
yoghurt	
dosa, coconut chutney	
chickpeas, potatoes, chapati, yoghurt	
some muffins and snacks	
rice sevai	

Fast food was consumed by two participants for dinner and classified as “Western food”. Another participant had pasta for dinner, which he described as “Western food”. One participant categorized orange and kiwi as “Western”, because she was not sure of where the fruits came from. Together with fast food, the two participants drank green tea, which they termed as “Western food”.

As “Other Asian food” one participant ranked chicken curry with fried potatoes and rice and another one ranked bread and mayonnaise within this category. One participant who consumed fast food in the form of a cheeseburger for dinner categorized these as “Western food” and at the same time as “Other Asian food” as he did not want to limit it in one category.

Some participants divided their dinner food items into different categories, hence there are more than 23 cases described for dinner. In one case, grapes and water are mentioned in addition to the main dinner, but both were not classified.

Snacks

Two participants did not have snacks on that day. During the interview, most participants stated that it is not common in India to drink at meal times. Water is usually consumed before or after meals but not within a meal. Therefore, drinks were mostly described within the category “snacks”.

Snacks were eaten or consumed as a drink between 10.30 am and 10 pm. The main snack time was between 3 pm and 5 pm ($n = 12$). But as the drinks, mainly tea, were included in the list of snacks, a wide time range was described. Most participants ($n = 15$) did not give any information about the place where they had their snack. Five stated that their snack was homemade; from those, four described their tea as homemade. Another five bought their snacks from outside the home. As some participants had more than one snack, multiple choices were made concerning the place.

As presented in Table 20, ten participants termed at least one of their snacks as “Indian” food or drinks. While the participant who described “chocolate” as “Indian” food added, that she is not sure about this and it might be “Western”.

Table 20: Snacks: food and drinks classified as “Indian” in the 24 h dietary recall (source: author’s own)

snacks (food & drinks) (multiple answers)

chocolate
biscuits, banana
pear
coffee, water
tea (Indian style) 5 x
pumpkin pancake flour

Table 21 shows that nine participants classified one or more of their snacks as “Western” food or drinks. One Indian migrant classified her snacks “biscuits, banana” as “Western” and at the same time as “Indian” as she was not sure where the food came from.

Table 21: Snacks: food and drinks classified as “Western” in the 24 h dietary recall
(source: author’s own)

snacks (food & drinks) (multiple answers)

cashewnuts, bar's
biscuits, banana
toasted bread & ketchup
bread toast with Kaya
Milo
tea, juice
juice/ ice lemon tea
cookies, nuts
bread

One participant each classified water and Milo in the category “Other Asian food”. Another participant also specified “butter toasted bread” in this category. Additionally, “coffee and peanuts” and “oats biscuits” were described as “Other Asian food”.

Table 22: Overview on meals described in the 24-hour dietary recall based on classification and place of eating. (source: author’s own)

n=23	Indian food		Western food		Other Asian food	
	home	outside	home	outside	home	outside
Breakfast	10	3	8	0	1	2
Lunch	11	8	0	1	1	2
Dinner	19	0	2	2	1	2

Table 22 shows how participants (n=23) classified their meals and the place of eating. Some meal items were classified into different categories. Therefore, more than 23 classifications are mentioned. This table does not include drinks and snacks.

3. THE ACCULTURATION PROCESS AND RESULTS FROM THE EAAM

This chapter presents the results of the acculturation measures, including the EAAM and the single aspects for assessing the acculturation process.

3.1. Cultural and psychological aspects of the acculturation process

3.1.1 Initial Phase in Singapore

All participants relocated to Singapore by their own choice, either for education, economical reasons or to join their husband. They each experienced leaving their home country and family, as well as their initial phase in Singapore, in different ways.

When asking participants how they perceived the relocation to Singapore and their first weeks or month in the country, the answers diverted in two different directions. One group (n=11) did not have problems leaving their family and home country and they coped well in Singapore from the beginning. Most of these participants already had friends or family members in Singapore. Some were used to moving as they lived overseas before or had lived apart from their family in India previously.

“So I felt it's just like another city, going to another city in India. So I didn't feel any ... anything ... no feeling. It's just normal.” (IP r, line 39)

“Ahm, I didn't find so, so difficult, because I only stayed with my parents till my ten started. After that, I was always in hostels or it's my college education I was far away from my home.” (IP p, line 134)

Most often participants stated living in Singapore is fine for them as it is also a short flight back home and they would live away from their family in India as well.

“Ahmm, it's not a big thing because it's only four hours distance from my home. So even if I work in India, I still have to travel the same four hours to work ... to workplace. So, no big change.” [IP smiles.] (IP d, line 64)

The other half of participants (n=12) described their relocation and their initial phase in Singapore as a “hard time”. Some said it was difficult but they adapted after a while:

“So it was difficult in the beginning. But here then you ... it just grows on you. You just get used to the place.” (IP 14, line 18)

Still, others suffered a lot from leaving their home and it took them a while to adapt on their new life in Singapore:

“(...) it was a dramatic situation in my life.” (IP b, line 6)

“So I was very frustrated the few ah months of ... the first few months in Singapore was really horrible.” (IP u, line 54)

One participant stated she missed her family a little, but relocating to Singapore was also very exciting.

3.1.2 Attitude towards Singapore, future plans and home trips

One issue within the interview was trying to discover the participants overall actual attitude towards their host country and to find out if they could imagine living there forever.

Several participants (n=12) stated, they like the city and used mostly positive terms to describe it like *“nice”*, *“clean”*, *“secure”*. Some even called it a *“home away from home”* and appreciated the Indian culture in Singapore.

“It’s ... we all jokingly say it’s ... it’s one of the nicest suburbs of India” (IP l, line 707)

“(...) it’s just like another city in India.” (IP r, line 75)

This group included predominantly women, who live in Singapore for more than seven years and stay together with their family.

Ten participants expressed a divided opinion about Singapore. While they liked the city and found it convenient to live there, they found it also *“boring”*, *“monotonous”* or *“locked up”*, because it is a small country and there is not much to do in their free time. The high *“workload”*, unfriendly people or high prices were also negative aspects they mentioned.

“Locked up means it’s a small nation and ah the life is pretty much restricted to flats ah which I’m ah, which I’m not used to. (...) And [short thinking] it’s a bit frustrating here, a bit ... but it has a lot of positives also.” (IP p, line 121-122)

“Singapore [thinking for a short moment], ok it is secured in several ways but the cost of living is very high.” (IP g, line 132)

This group included predominantly women and men who live in Singapore less than six years and stay together with flat mates.

Two participants did not feel comfortable in Singapore. Their opinion about the country was predominantly negative. One found it very work-oriented and missed his culture. The other one said Singapore is too small and there is not enough entertainment. Both found people in Singapore unfriendly.

In spite of identifying positive elements in Singapore’s culture, 18 participants stated that they plan to move back to India or to another country one day. Some mentioned a time frame in the near future, which ranked from *“very soon”* to *“in 5 to 6 years”* while others want to move back for retirement or once they are married.

"It's very comfortable here, no doubt about that. So ah [short thinking], well, definitely not to retire but, yeah, long term. Yes. I could imagine living here for longer." [IP laughs.] (IP t, line 46)

"So, if I get in the good university or something and then I can stay, till I complete MBA and then after that, 2 more, 2 years." (IP o, line 139)

Reasons for moving back were mostly to support family or because participants felt India to be their home country.

"I like Singapore, because of the things given, but there is always you need to balance things. Family is more important to me so I'd go back." (IP i, line 1132)

"It's home away from home but it's not permanent home." (IP k, line 357)

Only two participants said they could imagine living in the country forever. Four interview partners were undecided about their future plans (Table 23).

Table 23: Attitude towards Singapore (source: author's own)

n=24	Attitude towards Singapore		
Imagine to stay in Singapore forever	positive (n=12)	divided (n=10)	negative (n=2)
no (n=18)	7	9	2
undecided (n=4)	3	1	0
yes (n=2)	2	0	0

19 participants indicated that they travel to India on regular base to visit their families. As shown in Table 24 the number of home trips per year was for most participants equipollent to their length of stay in Singapore. Indian migrants, who stayed in Singapore more than five years, travelled home once per year or less. Those who lived in Singapore less than five years undertook at least two or even more home trips per year. One exception was made by one participant who lived in Singapore only for three years and travelled home only once per year due to job reasons. Four participants did not talk about their home trips. It has to be mentioned that the parents or parents-in-law visited those participants with a longer length of stay in Singapore (≥ 7 years) at least once per year for several weeks.

Table 24: Number of home trips per year in relation to length of stay in Singapore (source: author's own)

n=20	Number of home trips per year				
Length of stay in SGP	>2	2	1-2	1	<1
>5 years	0	0	0	5	2
< 5 years	3	7	2	1	0

3.1.3 Cultural changes

Celebrating Indian festivals in Singapore

Festivals are an important element in the Indian culture. Therefore, to investigate if and how migrants changed their habit of celebrating Indian festivals in Singapore is one significant aspect of acculturation.

In total four participants stated that they do not celebrate festivals in Singapore at all. They were all men, living in Singapore four years or less, with Indian flat mates. Most of them explained they do not celebrate due to time reasons. One said he celebrates only when his wife is in town. At the point of the interview, she was in India to give birth. Another one said he used to celebrate before, but now he has to work and "(...) *easily forget that day.*" (IP b, line 450). He admitted that he misses the Indian festivals a lot.

Five Indian women celebrate the festivals in "*a big way*". One of them said they celebrate all Indian festivals, others named up to 14 festivals, which they celebrate per year. They all want to keep traditions, even if one stated:

"Hmm...actually we try our best to do everything that one needs to do but, ah yeah, I guess it's just that, you know, you don't get the feeling of it, because nobody else is really doing it. I mean, when we find people like us, who moved from India, not everyone really follows the tradition because, you know, generally since there are no elderly people around." (IP q, line 84)

In total 15 Indian migrants celebrate festivals "*on a smaller*" scale compared to when they are in India. Most of them celebrated a few selected festivals, which are of major importance for their god. Reasons for reduced celebrations were again mostly due to limited time. Peer group influenced the festival celebrations to a certain extent. IP d stated that she planned to go to the temple for the last Deepavali festival but then decided to join her friends watch a movie. While IP i visited the temple, his friends did not join him.

Each state in India and sometimes each region, puts different emphasis on the diverse festivals. In Singapore, two major Indian festivals are celebrated with a public holiday, Deepavali and Vesak Day. Hence, most festivals, which are important to the participants like Onam, Tamil New Year, Ganesha festival or Pongal are not public holidays. This means, if the festival is on a working day, they have restricted time to celebrate.

"Even [short thinking] ahm every month we have some other things going on in India. [smiling embarrassed] (...) So we cannot do everything here openly so we just do it in a very small private prayer and all that we do at home." (IP r, line 87-89)

“Like, sometimes we celebrate. If it should fall on weekend, then it's okay.” (IP j, line 167)

Activities that were mostly named in relation to festival celebrations were “cooking at home” (14 times) which mostly happened with the family or friends and “visiting temple” (8 times). Another focus for celebrating was on “meeting friends” (6 times), visiting in Indian restaurants (5 times) and doing puja at home (4 times). Three participants bought new cloth for festival days.

Overall, participants with children were more festival orientated than childless participants. As IP n explained:

“Probably in the future, we want to ... go witness the festival so that I can show to my kid ... how it is during the festival time, mh. But since I already know what's being done, ha, not very particular.” (IP n, line 160-162)

Temple and church visits in Singapore and praying (doing Puja) at home

Two participants were Christians. Therefore, church visits are also included in this chapter. Similar to Indian festivals, praying and visiting temples are an important part in the Indian culture and an aspect for the migrants' acculturation in the host country.

As can be seen from Table 25, almost half of the participants (n=11) visited temples in Singapore on a regular basis, which was once per week, once in two weeks or once per month. Most of them did regular temple visits in India as well.

“So I'm still continuing from ... started very long back, so I'm still continuing in Singapore. Every month, one day I'll do fasting and then I go to temple.” (IP e, line 159)

IP x goes to the temple more often since she lives in Singapore, as she is staying with her grandparents who force her to go. While IP h visits the temple once per month, but said in India he went there once per week. He does not follow most of the religious customs from India and states that he lost some traditions since he is living in Singapore:

“I think of them. [the traditions] But I can't ah actually enjoy. So it's ah in my mind as well as inside my heart so I don't forget it. I will be an Indian traditional guy.” (IP h, line 334)

Nine participants visit temples irregularly, mostly for festivals, birthdays or when they do not feel well. Some of them did not go to temples on a regular basis in India either. Others have reduced their temple visits in Singapore because there

is no pressure from the parents or they do not like temples in Singapore or they are too lazy to go.

“But going to the temple is only like, you know, actually we have like a star birthday for each of us (...) So whenever that comes for somebody, we visit the temple or if there's a particular festival like Diwali or Tamil New Year ...” (IP q, line 98)

“Singapore, yes, once in a while, not very regularly, like every Friday ... nothing like that. So probably during Deepavali or the New Year. So selected days we go.” (IP r, line 165)

Three participants do not visit temples in Singapore at all. One did not visit temples in India as well. Two liked to visit temples in India and still do so on their home trips. They underline that they still believe in god, but find temples in Singapore too commercialised and crowded.

“(...) I find like here temples are more or less a tourist attractions or something. Like ... all the main temples tourists go but back home in India temples mean its very quiet when you go there you ... you are in a different world like its very quiet and ah ... space there is a lot of space like and ... very, very nice [smiling happy] but I don't like the commercial temples.” (IP a, line 38)

Table 25: Frequency of temple visits in Singapore (source: author's own)

n = 23	Temple visits in Singapore		
	regular base	not regularly	no
number of IP's	11	9	3

One participant visits temples but did not talk about the quantity of visits. She is very traditional and she *“keeps the tradition alive”*. It can be assumed that she did not change her habits concerning temple visits.

However, the habits of visiting temples provide only a shallow impression of the migrants' religious life in Singapore. As IP l explained:

“Hinduism (...) is more like a way of living.” (IP l, line 390)

Temple visits are not inevitably equated with being religious (RANGASWAMY 2000:123). Participants who state that they do not go to a temple on regular basis might not have changed their religious traditions in Singapore. Like IP d, she does not have the energy to get up early in the morning for a temple visit but said:

“(...) about religion, I still follow all the rituals and everything. (...)” (IP d, line 156)

IP b does not like the temples in Singapore, but underlines that he did not lose his faith:

“I was going here yes, but after some ... period like I just happened to ... stop actually, like I did not like the temples here somehow. I just stopped all that stop means not I don’t like the god (...) I have just a small thing in my house and I just pray there.” (IP b, line 428)

IP q, who lights the lamp twice a day as in India, said religion is important for her but visits the temple only from time to time.

Some participants changed their habits of doing puja:

“But traditionally, we have to pray every day. But no, I don’t do it anymore.” (IP o, line, 165)

She stated she feels “*half modern and half traditional*” as she does not follow all Indian traditions anymore and does not visit temples regularly.

Considering the difficulties in assessing the significance of religion for participants and related changes in Singapore, the only generalization that could be done based on the data is that religion is still important for most of the surveyed Indian migrants. It is practiced to certain extents depending on the migrants’ personal attitude, spare time, relationship to parents and household composition.

The role of caste in daily life

Most participants did not have a problem talking about caste, although this was supposed to be a sensitive issue within the interview. Twelve participants named their caste. Six of them were Brahmin; two belonged to the Kshatriya caste and the others to Nayaer, Mudaliar, Iyengar and Chattier caste. Brahmin is the highest caste as explained in chapter II 5.3.1 and Kshatriya (warriors) the second highest, Chatters belong to the third highest caste called the Vysyas (merchant) The Iyengar caste was found to be part of the Brahmin caste. Nayaer is explained to be

“(...) not an upper cast it is not a lower cast it is somewhere in the middle.” (IP a, line 263)

IP h explained Mudaliar caste as follows

“Sengunthar Mudaliar is not so rich. But ah ...they are the workers for the Jaminda⁷.” (IP h, line 242)

⁷ Person who rules the village (IP h, line 240)

Arranged marriages were the most relevant issue when talking about cast with the participants. They explained the process of arranged marriages in detail and most married interview partners had an arranged marriage. They were happy with this system.

“I feel that, ahm [short thinking] in arranged marriage, you ... you are backed up by the whole family.” (IP o, line 702)

IP and IP b explained that the caste system is still a big issue in India and that the government is working hard against this influences, but it is rooted in people's minds. IP a admitted, it would take a long time to remove the caste system from the country.

“(...) when you talk about ahm developed countries like Germany, or like for example Singapore, where people are ... people (..) everybody is people, ahm, so it ... it would take definitively a longer time or maybe never [smiling embarrassed] in India to get out of this wise of caste and religion and ah things like that, because our people are different. I mean, look, getting out of religion is ... impossible.” (IP a, line 270-272)

The comment of IP r demonstrates the intensive relationship between cast and eating behaviour:

“(...) it may be helpful for certain aspects like vegetarians marry vegetarians so there is no conflict in their home.” (IP r, line 462)

IP g explained in detail how the castes are organised in his village, which is described in appendix 11. His statement is another example for the deep relationship between caste and eating behaviour in India, which is still alive in rural Indian areas.

Some participants who came from a town or city explained that some caste related issue were practiced by their parents or grandparents generation:

“(...) even my parents they don't think much even when I bring some others to my home and have food ah they will definitively not mind ... maybe my parents ... my grandparents they will definitely think: 'oh why should he ... he's from that cast and things like that yeah.” (IP b, line 296)

“(...) they [her in-laws] had a problem with a low caste person cooking and then them eating. So I had to ... when I hired a cook, I had to make sure that she was a high caste person.” [IP laughs.] (IP q, line 526)

But they underlined that these issues do not matter anymore in their generation. However, the majority of participants narrated that caste was not a big issue in their parents' home in India:

“At least in our family, we didn't have that kind of any discrimination. Not at all.” (IP m, line 229)

“Even in India itself, we never ...[short thinking] caste system, we don't feel much (...) we never have mind that, there's a caste system in India.” (IP j, line 457)

Interview partners, who came from towns or cities confirmed, that caste is of minor importance there compared to villages (IP t, IP h, IP k, IP t).

In Singapore, caste was not an issue at all in the daily social life of any participant. The ones who lived together with other Indians stated that they do not care about their flat mates' caste or religion.

“Here, ah... coming here, I mean, interacting with other people, the castes are ... their background or which culture, religion they come from, doesn't really, ah, come in the picture.” (IP o, line 725)

“If my friends are coming over, be it from any religion or any caste or anything like that, they are free to come to my house.” (IP u, line 638)

3.2. Results from the East Asian Acculturation Measure

Within the EAAM, 18 participants scored highest on the integration sub-scale. This result indicates that these participants overall tend to be interested in both, maintaining their Indian culture and interacting with the Singaporean culture.

Four participants scaled highest in separation, indicating that they tend to hold on to their Indian culture and avoid interaction with the Singaporean culture.

One participant scored highest in the assimilation subscale, which suggests that she prefers to identify and interact primarily with the Singaporean culture. None of the interview partners scored highest in the marginalisation subscale, which would have meant that they neither are interested in maintaining their Indian culture nor in interacting with the Singaporean culture.

As can be seen from Figure 18, overall the Indian migrants' acculturation processes ranked from highest in integration ($M = 4.8$, $SD = 0.2$); second in assimilation ($M = 3.7$, $SD = 0.6$); third in separation ($M = 3.6$, $SD = 0.9$); and last in marginalization ($M = 2.0$, $SD = 0.3$). Assimilation got the second highest score from ten participants while separation got the second highest score from seven participants.

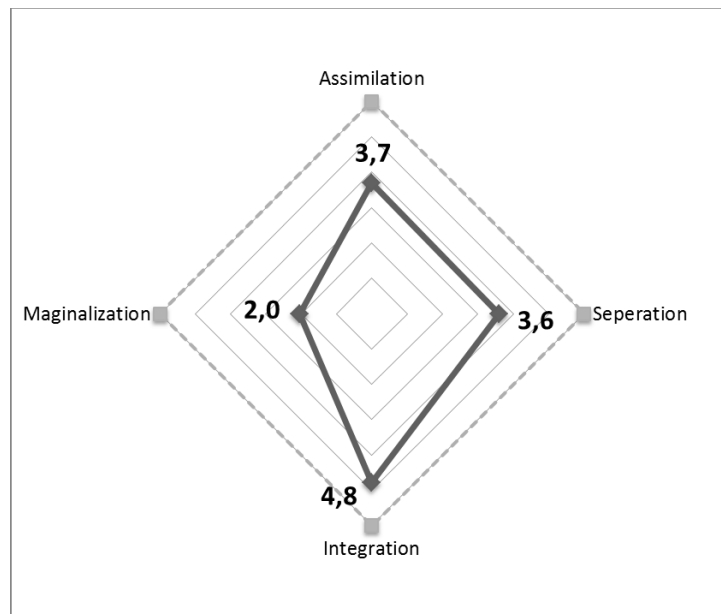


Figure 18: Means for acculturation strategies of Indian migrants in Singapore (source: author's own)

Figure 19 demonstrates the results for the single items of the EAAM. Overall the item scoring, the highest level of agreement received number 11 from the integration subscale: "I have both Singaporean and Indian friends." This aspect scored 5.1 on average. The result was followed by the two second highest scoring items, which were number 13 of the assimilation sub-scale: "I get along better with Singaporeans than with Indians" and the item 6 of the separation subscale: "My closest friends are Indian". Both were scored with 4.9 on average. These results indicate a contradiction.

Both lowest scaled items are located within the marginalization subscale. Item 8 "I sometimes feel that neither Singaporeans nor Indians like me" scored with 1.6 and item 23 "Sometimes I feel that Indians and Singaporeans do not accept me" scored marginally higher with 1.7.

The highest differences between the scores were identified in the separation subscale. Item 6 "My closest friends are Indian" scored 4.9, while item 25 "Indians should not date non-Indians" scored 1.9. These findings were confirmed several times within the interviews, like in the case of IP c or IP d whose friends and flat mates are Indians:

"Most of my closest friends are Indian actually, people I generally hang on a lot with are Indian and luckily they are quite equally you know..." (IP c, line 419)

"Yeah, all are Indians [her flat mates]. All are from my place. We all speak the same language, same food and everything the same." (IP d, line 458)

While participants were found to be open to meet people from other cultures. IP g stated he invites his non-Indian colleagues for Indian food whenever he has a

chance. Most other interview partners were also found to be very open to meeting people from other countries and cultures. IP k even said:

“(...) my closest friends, when I first came to Singapore, were Chinese locals.” (IP k, line 467)

However, meeting people from other cultures was limited to persons from the same gender, especially for non-married participants.

Question	Acculturation Item	M	SD
Assimilation			
1	I write better in English than in my native language	2,7	0,8
5	When I am in my apartment/house, I typically speak English	3,5	1,2
9	If I were asked to write poetry, I would prefer to write it in English	4,4	1,4
13	I get along better with Singaporeans than Indians	4,9	1,1
17	I feel that Singaporeans understand me better than Indians do	3,4	1,2
21	find it easier to communicate my feelings to Singaporeans than to Indians	3,4	1,1
24	I feel more comfortable socializing with Singaporeans than I do with Indians	4,0	1,5
27	Most of my friends at work are Singaporeans	3,3	1,2
Categorical Means and SD		3,7	0,6
Seperation			
2	Most of the music I listen to is Indian	4,4	1,4
6	My closest friends are Indian	4,9	1,1
10	I prefer going to social gatherings where most of the people are Indian	3,4	1,2
14	I feel that Indians treat me as an equal more so than Singaporeans do	3,4	1,1
18	I would prefer to go out on a date with an Indian than with a Singaporean	4,0	1,5
22	I feel more relaxed when I am with an Indian than when I am with an Singaporean	3,3	1,2
25	Indians should not date non- Indians	1,9	1,3
Categorical Means and SD		3,6	0,9
Integration			
3	I tell jokes both in English and in my native language	4,7	0,9
7	I think as well in English as I do in my native language	4,6	1,0
11	I have both Singaporean and Indian friends	5,1	0,6
15	I feel that both Indians and Singaporeans value me	4,7	1,0
19	I feel very comfortable around both Singaporeans and Indians	4,7	0,7
Categorical Means and SD		4,8	0,2
Maginalization			
4	Generally, I find it difficult to socialize with anybody, Indian or Singaporean	2,0	0,9
8	I sometimes feel that neither Singaporeans nor Indians like me	1,6	0,7
12	There are times when I think no one understands me	2,3	1,2
16	I sometimes find it hard to communicate with people	2,5	1,3
20	I sometimes find it hard to make friends	2,2	0,9
23	Sometimes I feel that Indians and Singaporeans do not accept me	1,7	0,6
26	Sometimes I find it hard to trust both Singaporeans and Indians	1,9	0,9
28	I find that both Indians and Singaporeans often have difficulty understanding me	2,0	0,7
29	I find that I do not feel comfortable when I am with other people	2,1	1,1
Categorical Means and SD		2,0	0,3

Figure 19: Means and Standard Deviations of the EAAM items. (source: author's own)

Due to the low number of participants, the survey is not representative. However, the intention by using the EAAM was to provide an assessment of the participants' acculturation strategy.

4. CASE ANALYSIS

Data of the interviews was condensed into meaningful individual reports for each of the 24 participants. According to the “*assurance of confidentiality*”, (LOFLAND AND LOFLAND 1995:43) all names of participants were changed to pseudonyms. Each report includes a central statement of the interview partner, which characterizes their eating behaviour or personal attitude to their diet. This is followed by a table with socio-demographic data and the results for each research question in note form. The table also includes results for the 24-hour dietary recall and the EAAM. The table is followed by a summary of the interview.

For the purpose of clarity, four case analyses were selected and will be described in the following. The further 20 case analysis can be found in Appendix A13 to A32.

The four selected case analyses were chosen based on the de facto structure of the sample as shown in Table 11 (page 81). This structure classified the participants based on their marital status and their gender. One participant of each classification was chosen as following:

- male single: IP b
- female, single: IP d
- male married: IP n
- female, married: IP q

4.1. Interview b

“(…) in India like my mother still prepares the breakfast, a rice bowl than some curry, some sides, some good food, that food ... we never get here [laughing a bit sad] whatever the price I pays.” (IP b, line 100)

Table 26: Characteristics of IP b (source: author's own)

Socio-demographic data						
State of origin		Karnataka				
Gender		male				
Age		26				
Marital status		single				
Housing situation		living with Indian flat mates				
Years living in Singapore		3				
Employment		Engineer, fulltime				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• “skips” breakfast to milk and “normal” bread• increased meat intake• increased fast food intake, especially in the beginning• eats out more often• started cooking				
Affecting Factors		<ul style="list-style-type: none">• less variety of foods• taste: likes fast food, does not like taste of Indian food in SGP• eating culture in SGP: eating too fast, not relaxed• availability: less South Indian food• parents• health• trust: stopped trying NIF due to bad experiences				
Acculturation Aspects		<ul style="list-style-type: none">• SGP: nice, clean secure, enjoying liberty, missing Indian food and festivals• will move back as soon as his parents need him• stopped visiting temples in SGP, too commercialised• stopped celebrating festivals				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF ⁸	WF ⁹	OAF ¹⁰
Breakfast	a cup of chocolate malt, 3 slices of bread	8.00 am	home	x		
Lunch	kansama (buffet lunch), authentic North Indian food with lots of varieties	12.00 pm	outside food	x		

⁸ IF = Indian Food

⁹ WF = Western Food

¹⁰ OAF = Other Asian Food

	food	time	place of eating (home/outside)	IF	WF	OAF										
Dinner	puligare (Mixture of rice with spicy masala)	10.30 pm		x												
Snacks	cashew nuts, Bar's	10.00 pm			x											
East Asian Acculturation Measure (EAAM)																
<div><div>Interview Partner - b</div><table><thead><tr><th>Category</th><th>Score</th></tr></thead><tbody><tr><td>Marginalization</td><td>2,3</td></tr><tr><td>Integration</td><td>5,0</td></tr><tr><td>Separation</td><td>3,7</td></tr><tr><td>Assimilation</td><td>4,0</td></tr></tbody></table></div>							Category	Score	Marginalization	2,3	Integration	5,0	Separation	3,7	Assimilation	4,0
Category	Score															
Marginalization	2,3															
Integration	5,0															
Separation	3,7															
Assimilation	4,0															

General information about his life in India

IP b lived with his parents in Bangalore until he moved to Singapore. He comes from a traditional family and has one married sister. Whenever he is in India he visits his hometown temple, which is very important to him. Otherwise, his parents go and pray on his behalf.

Eating habits in India

Coming from a village his parents practice a natural way of life and know which food is good. His mother cooked all meals for the family. She gave him Ragi balls, a traditional Indian home remedy, every day.

As soon as IP b got up in the morning his mum gave him **chocolate malt**, after this he had his **breakfast, rice with curry and some side dishes**. His mother packed **lunch** for him and **dinner** he had at home. For snack time he mostly ate homemade snacks. They had exclusively Indian food in his home. About his mother's cooking skills, he says: *"(...) at least for a whole month she can prepare different variety of curries and maybe something else. For the whole month we have so much variety"*.

On Mondays, they ate exclusively vegetarian food for religious reasons. In total, he had **non-vegetarian food around three times a week**. He does not eat beef and pork.

He had been to McDonald's only once in 24 years and that was unknowingly. As his family is quite traditional they do not encourage having food outside. Only

rarely, they ate Indian or sometimes North Indian food outside for afternoon lunch at parties.

At his home, every festival food has a definite meaning and *“we prepare the food and have it nicely.”* One famous and healthy festival food is Obbattu, which is also his favourite food. His mother always prepares it when he comes home.

Historically, upper caste people are richer and can spend more money on healthy and fancy food, even if the lower caste people have more money now, they still follow the same food culture. *“... nowadays everything is depending on money ... but the clashes will be there always.”* His parents would definitely not mind if he would bring friends from other castes home for having food, but maybe his grandparents would worry.

The relocation

IP b never travelled or lived overseas before relocating to Singapore. He moved mainly to make money and to gain experience. The relocation was hard for him *“It was a dramatic situation in my life. No it’s good that I did not realise it happened very fast, before I decide a thing everything happened.”*

He knew only one person in Singapore and he came on a loan of 300 SGP\$ from the outsourcer, which was *“big money”* for him at that time. The outsourcer booked his ticket and got the visa for him. The company arranged 15 days accommodation, after this he found an accommodation with people from his native place.

General information about his life in Singapore

IP b said Singapore is a nice country; it is clean and secure. Although he misses the Indian food and festivals, at the same time he enjoys his liberty in Singapore. The relationship to his parents is very deep and whenever they need him, he would move back to India. In the beginning he was travelling home once a year, now two or three times a year.

He rented a small room in a HDB¹¹ flat where he stays together with the landlord couple and with another bachelor. They are all Indians. Physical yoga is his favourite activity in Singapore. In the beginning, he visited temples, but after some period, he stopped, as the temples in Singapore are from his point of view too commercialised, and *“god cannot stay in there nowadays”*. He still likes god, every god, and prays at home.

¹¹ HDB = Housing & Development Board

Eating habits in Singapore

Food is very important for him: “(...) *food is ... really important [smiling]. Ah ... because like we earn (...) some money ... so at least ... there should be some good food, so that we maintain ourselves, so that we can earn again.*” [smiling happily]

He lost 12 kg within the first few months after arriving in Singapore, from 72 to 60 kg. This was due to his nostalgia, but also based on his increased sport activities. Now his weight is almost constant. However, when he stays in India for one or two weeks, he gains 5 kg.

In Singapore, he skipped the ritual to eat only vegetarian food on Mondays and his **meat intake increased**: “(...) *we have everything everyday*”.

In general, he **skips the breakfast**. While “skip” means to him that he has a **cup of milk and “normal” bread from the bakery shops**. Sometimes he has a banana or an apple in the morning.

For **lunch** he goes to one of the **food courts near his office**, he says about himself that he is a traditional person and prefers traditional Indian food, and sometimes Western food. His favourite cuisine is the South Indian. On Fridays, he has lunch with his colleagues at a “good” restaurant. About eating out, he says: “(...) *during recent times ... of course I can't avoid [to eat out]*”. Once he went with friends to an Indian restaurant in Little India where the cook made a special biryani. That was the best food he ever had in Singapore.

In the beginning, he was open to try food from other countries, like Malay and Indonesian food. After having an upset stomach from eating Malay food, he immediately stopped trying non-Indian or non-Western food and sent a warning Email to his colleagues about this particular food stall. In Singapore, to him Chinese food is very raw with less oil, while the Indian food contains a minimum of fried items and Western food is very oily. Oil symbolizes an unhealthy food for him.

Two to three weeks back he started to cook his own **dinner**. Before he always had dinner outside, often at McDonald's. During his initial phase in Singapore, he had **McDonald's food once per day** and said McDonald's food was great food for him when he was new in the city. His thoughts were like “*so big chicken, it save the bread, wow*”. Now he only goes to McDonald's to join his friends.

He is not very happy about the Indian food in Singapore, especially about his lunch in food courts and states that he rarely eats good food in Singapore.

Concentrating on Indian food and on eating in food courts restricts the variety of food for him: *“In India we had a lot of variety of foods. Here I have only 2 choices one of fried rice the other one is naan [laughing]. (...) you cannot have it for longer time maybe 6 months maximum. Than later on I try something else or say let me have some fruits and then sleep kind of thing, sometimes I held on this yeah”*. In India, there are 5 to 6 varieties of papads, which taste much better than in Singapore. There, they have only one type and this one does not have any taste at all. He also complains that there are only North Indian dishes available in the food courts and that even the dhal they sell in Singapore is from North India. Very rarely, he has seen South Indian food in Singapore.

He also does not like the way of eating in Singapore and explains that Indians like to sit down and take time for food while in Singapore people are expected to eat their food faster when eating out.

IP b **started to learn cooking** by watching his landlord when she cooked dinner. Now even if he comes home late from the office he tries to cook by going to the kitchen to see which items he has and then mixes them up. *“... just thinking ‘what experiment should I do today ...’”*. He cooks easy meals with rice and some mixes and boiling dhal or mixing egg with onion and tomato. However, cooking different food every day is an important issue for him. His landlord lady tasted his food and liked it, which made him very proud. Since he started cooking, he is very happy, as he does not have the same food every day as he did before. He added if he does not get good food in the evening, he gets tired easily while jogging the next morning. As he loses many minerals due to jogging and tries to get it back with food.

If he is not in a cooking mood, he just eats fruit. He mixes mainly papaya, apple or banana and eats a “huge quantity” of it. IP b stated that Papaya is very good for health and has many vitamins. But it has a lot of heat, so he needs to do lots of exercises to put out the heat, otherwise he will get pimples.

He always prepares Indian food and said he would like to cook the food his mum cooks, but he does not know how to prepare it. His mother’s cooking skills are highly respected by him; she cooks “very nice and very health food.” Sometimes his mother guides him on the phone about how to cook, but he forgets it because she tells him such a big list. For snacks, he always keeps chocolate malt powder with him, like the one his mother made for him every morning in India. So when he feels tired he just eats the powder without milk or water. He also **started to eat cashew nuts on a more regular base** in Singapore. His favourite drinks are mango shakes and Avocado drinks in the food courts.

Initially, when he stayed with other roommates, they used to celebrate the Indian festivals in Singapore. They prepared some good food and sat together to eat. Since he lives in the new apartment he stopped that. Now he just calls his parents and wishes them the best. As they get no leave in Singapore for most of the Indian festivals and he needs to go to work and he sometimes even forgets that day. Deepavali and Ganeshra are important festivals for him and Yugadi. He definitely misses the festivals, mainly his mum's food, especially Obbattu. Whenever he is in India, he takes food to Singapore, especially chapati. When he is in India, his mother still prepares hot chocolate for him in the morning and she will cook his favourite food. During his last visit in India, she kept all the festival food for him as it was close to a festival. He tried to give Indian festival food from his mother to his Singapore colleagues, but they were very sceptical about this food, so he regrets doing this.

Very important when grocery shopping is the economical factor for IP b. Maximum twice per month he goes to Mustafa to buy spices and said he will not get even a single Indian spice in FairPrice. Everything else like vegetables he buys from FairPrice ones a week or in two weeks. He complains about the lack of freshness in the Singapore groceries. As the foods are frozen and stored for a long time in the fridge, they might already be a bit old and lost most of its minerals by the time they are consumed. He prefers to eat food as fresh as possible and does not store it for long. In India, they prepare everything fresh.

The health factor of Indian food is very important for him. He explained that ragi balls are one of the healthiest foods in India: *"Because ragi ball like those people who are having ragi balls even now even the age of nineties, they can read properly, they can walk without stick and they can still go and work in farms."* Ragi balls are the main food especially in some of the villages. But the present generation has changed, *"they eat some fancy food."* Ragi balls are not very tasty by themselves, but eaten with curry they taste very good and are filling and healthy. IP b has never seen ragi balls in Singapore.

His father is a sports man who had a big influence to his nutrition so far: *"(... whatever the food ... most of the things I just copy from my father. Ah ... because he is a good model to me right, so I copy from my parents and then from media ..."* He discusses with friends about recipes and looks in the internet, where he subscribed to a few websites for newsletters concerning food.

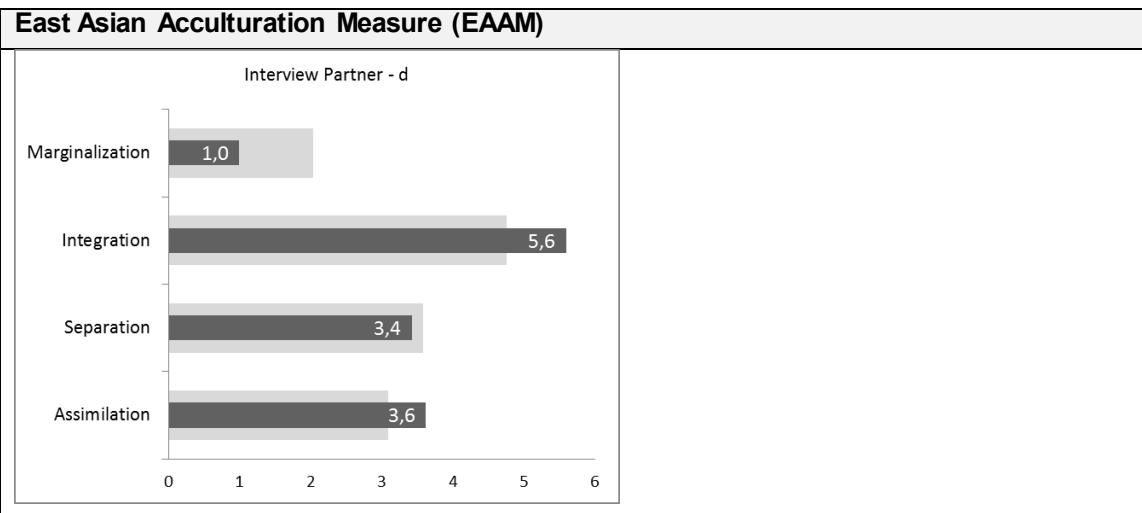
Life situation September 2013: IP b still lives in Singapore. He works for a different company and started to organize Yoga lessons during his spare time on weekends. These lessons are highly frequented by Hindus.

4.2. Interview d

“I notice ... I know, I tried the other food, but I'm not eating from there regularly. I'm still going to the Indian food store.” (IP d, line 300)

Table 27: Characteristics of IP d (source: author's own)

Socio-demographic data						
State of origin	Kerala					
Gender	female					
Age	31					
Marital status	single					
Housing situation	living with Indian flat mates					
Years living in Singapore	4					
Employment	Engineer, fulltime					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• non-Indian breakfast• more outside food• more milk and chocolate• bread, biscuits and fruits for dinner• replacing Indian food with milk and chocolate					
Affecting Factors	<ul style="list-style-type: none">• restricted time: changed breakfast and dinner• availability: more meat in the beginning, more fast food• attitude: reduced meat intake• taste: likes French fries• trust: does not trust in local vegetarian food					
Acculturation Aspects	<ul style="list-style-type: none">• like Singapore except the working culture• not planning to stay forever• visiting temples on regular base• celebrating festivals to lower extent					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	bread	7.15 am	home	x		
	plantain fruit, dhal, milk					x
Lunch	rice, curry, cabbage	12.15 pm	restaurant	x		
	plain water					x
Dinner	curry nan	8.15 pm	home	x		
	orange, kiwi				x	
	bread, mayonnaise					x
Snacks	chocolate			x		



General information about her life in India

She stayed in Kerala in a sister's convent/hostel with friends. It was near to her home, so she went home once or twice per week to visit her family. She stated not to be very traditional, but explained that the traditional family system in India is still there. With her family in India, she visited temples and is still doing so on her home trips.

Eating habits in India

Her caste allows her to eat meat. She never got any restrictions concerning food from her mother and added her mother would also consent if IP d starts to eat beef. One grandmother does not eat beef, but that habit stopped within the next generation. IP d ate meat until she was around thirteen years, then she stopped for moral reasons and started again later to eat meat on and off. In India, she liked the temples and the atmosphere there and she is considering that this was one reason why she gave up eating meat in India.

Before she came to Singapore, she did not eat meat and fish for two years. But her friends told her *"(...) I can't stay alive if I come here and be very strict that I want to be a vegetarian, so they forced me to eat some meat [IP smiling] hmm, before leaving India. So, I ate some meat and fish then, I came here."* In the sisters' hostel where she lived, they got Indian food every day. When her mother cooked at home, she got different food for breakfast, lunch and dinner. Hence, the variety of food was much bigger compared to her food in Singapore. Occasionally she ate **cereals** for **breakfast**, but most mornings she preferred **Indian steamed rice breads, uppam, dosa, sambar, idli, pudding**. Her favourite breakfast drinks were milk and milk tea made with a tea bag. Most of the time they ate at home in India. When they had outside food, it was mostly Indian food, some Western food, some Chinese food, but this tasted not like in

Singapore. Coconut and dairy products, like curd, cheese, ghee, were two of the main ingredients in her daily Indian diet. In India for every festival, her mother prepared a set of meals, starters, main dishes, desserts.

The relocation

She moved to Singapore because she likes travelling and has better job opportunities in Singapore as a software engineer. Leaving India was not very hard for her as it is only a four-hour flight home and when working in India she might have moved within the country, which could also have been far away from home. Friends of her family stayed in Singapore already, so she lived with them in the beginning and they showed her around in the country.

General information about her life in Singapore

In Singapore, she lives together with Indian friends. She likes to live in Singapore and her only complain is the different working culture that is very inflexible and strict. Religion is still very important to her. *"(...) about religion, I still follow all the rituals and everything (...)"* In Singapore, she visits the temple on weekends. For the pujas in the temple Hindus have to prepare flowers and it is recommended to do this with pure mind and pure body. Although the proper way of praying is to go very early in the morning, she mostly goes in the evening, as this is more convenient for her.

Eating habits in Singapore

A big difference to her diet in India is that she mostly ate homemade food there and overall she stated that the main reasons for her dietary changes are caused by her lack of time. She eats **more Western style bread** in Singapore and her mother advised her to choose bread with lots of grains. In India, she did not eat this bread as she got *"other good food there."* Furthermore, her **consumption of chocolates and dairy products, mainly milk, increased**. *"I am replacing the food I usually eat in India with milk or chocolate, so that kind of food. So that makes me more heavy, I think."* Also during her first weeks in Singapore she did not know where to get the food she wanted, so she kept eating meat and fish. She gained eight kilogram in eight month, consequently she started to reduce her chocolate intake and gave up eating chicken and meat. Eggs in cakes are fine for her to eat, but she does not like pure eggs. She tries to drink a mix of curd with diluted water, sugar, ginger and chili or curry leaves every day.

She mostly visits temples in the evenings on weekends and has to abstain from meat on those days, as it is not allowed to consume meat before going to a temple. At another part of the interview she stated to be vegetarian since 1,5 years. One reason for her to be vegetarian is from her religion due to the temple

visits. It is not getting clear in the progress of the entire interview if she eats meat at the time of the interview or not. In general, she eats meat on and off and explained: *“(...) one thing is, we don't need to kill anything. [IP laughs.] Second thing, it's, ahmm... maybe keeps body more clean. (...) when I sweat I can feel the smell of the chicken, when I eat it. If I eat vegetarian food, I can feel it ...there is a big difference in that. (...)”* [IP laughs.] In another explanation, she said that she still feels the beef in her tummy after eating it and that non-vegetarian food makes her sleepy and tired and takes all the energy from her body to digest. However, she admits that she likes the taste of meat, especially of fried chicken made by her mother. The topic “meat” seems to be a big issue for her and she mulls over several times within the interview whether she does like to eat it or not. *“But I like its [meat] taste. (...) But still I can ... condone ... not eating. (...) I can stop eating it, not problem. (...) But if I want to eat, still I can eat. Nobody stop me.”*

Food is the most tempting part of her home visits: *“By the time I reach airport, I'll be thinking what to eat.”* When staying in a place without Indian food, for one or two weeks she would be happy to try all new foods, but after that she would feel sad without Indian food.

For **breakfast** in Singapore, she mainly takes milk, some bread with Nutella, pineapple jam, honey or most of the time Mayonnaise, biscuits, fruits and very rare noodles or cereals. As she does not have time to prepare tea in the morning, she mostly takes milk. For **lunch**, she only eats Indian food at the canteen. She does not like the food, but has no alternative. When eating from Chinese food stores, she is not sure if the food is pure vegetarian. While at the Indian store, she can be sure to get real vegetarian food. She complains that the definition of “vegetarian” food in Singapore is not fixed.

In the beginning, she cooked **dinner** and packed lunch by her own. She stopped this, due to a lack of time. Now sometimes she cooks on weekend evenings. She bought processed flour for chapati, uppam and dosa, which just need to be mixed with water. IP also knows a few dishes to cook like, stews, curries with veggies. Her roommates all cook by their own due to different working hours and taste. But sometimes she cooks with friends. She also cooks pasta sometimes but stated that she is not sure about cooking Western food and prefers to prepare Indian dishes, also because she knows what is inside and is more familiar with it.

In Singapore, she eats out much more often compared to India. Mainly on weekends, she eats outside with friends. Then she prefers to eat Western or Indian food that she both likes more than Chinese food. Swensen's [a Western

style restaurant chain] is her favourite restaurant and she goes there twice per month, mainly to eat French fries. Sometimes she goes with her friends to Delifrance [a Western style restaurant chain] or they eat North Indian food. She visits Fast Food Chains like McDonald's or KFC once in a month and states to be very sceptical about the freshness of the oil there. However, she eats more Fast Food in Singapore compared to India due to "*more chance*". The South Indian cuisine is her favourite cuisine. IP d likes milk "*(...) if I don't get the food I want, I would still be going to milk.*" [IP laughs.]

With her friends, she tries to prepare at least some main dishes as festival food. If they cannot manage this due to time reasons, they go to a restaurant on festival days.

IP d obtained a lot of her knowledge about healthy food by the internet and by reading books about Ayurveda. She learnt from the internet, that vegetarian food keeps body more cleanly. In addition, her parents told her, which food is good for her body. Reading and learning about Mahatma Gandhi's Mohandas when she was younger influenced her thinking of food and her eating behaviour.

Even she states that every Indian food is available in Singapore and there is also a restaurant serving traditional food, she is missing the Indian rice and some Indian vegetables. As she does not want to give much trouble to her mother, she avoids importing much food from her home visits. However, when her friends travel to India, they bring several bottles of pickles for her.

IP d buys her groceries from Cold Storage and very rarely, she visits Mustafa for buying spices or curry mixes. Most important for her grocery shopping is the quality followed by the taste of the groceries.

Talking about healthy food she explained, Indian breakfast is very nutritious and Indian food is healthier as it has more veggies and more fruits. Eating a full Indian meal from starter to dessert provides everything a human need. Taking only one or two parts may not be enough. Furthermore, turmeric is a very good food, helping to protect from poison. Curd, coconut and coriander are very healthy as well as vegetarian food. While eating egg gives more pimples.

She believes in the Ayurvedic medicine, even if it takes longer to show an effect. When taking Ayurvedic medicine it is not allowed to eat non-veg food, otherwise medicine does not help. Most of her parents' advices are based on Ayurveda.

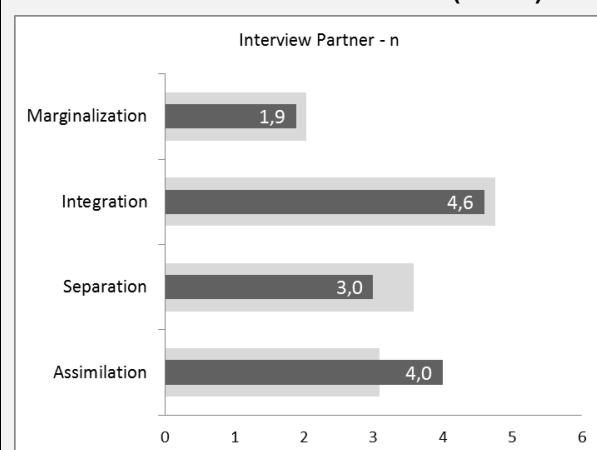
Life situation March 2014: IP d got married to a European man and lives with him in Singapore.

4.3. Interview n

“...only if the queue is a little bigger or if I'm already bored, then I try, go and try other food.” (IP n, line 273)

Table 28: Characteristics of IP n (source: author's own)

Socio-demographic data						
State of origin		Karnataka				
Gender		male				
Age		30				
Marital status		married				
Housing situation		living together with wife				
Years living in Singapore		5				
Employment		Software-Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• more fast food• tried Thai food, a bit of Western food• more outside food• NIF for breakfast				
Affecting Factors		<ul style="list-style-type: none">• mother: cooking Indian food when in SGP• cast: vegetarian• health• availability: lees vegetarian NIF• taste: prefers Indian food				
Acculturation Indicators		<ul style="list-style-type: none">• SGP has pros and cons, no plans to stay forever• visiting temples on regular base• celebrating festivals to lower extent				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	cereals pomegranate juice		home		x	
Lunch	naan set meal		outside	x		
Dinner	rice, vegetables		homemade	x		
Snacks	coffee, water tea juice		outside	x	x	

East Asian Acculturation Measure (EAAM)**General information about his life in India**

IP n grew up in Hyderabad, Bangalore, Mangalore and in many other places in India as his father had a bank job and they moved around often, which he enjoyed. He is married since five years and lived together with his wife and his parents before he moved with his wife to Singapore.

Eating habits in India

The whole family are vegetarians due to their caste. He explained Hinduism did not put compulsion to anything. Meanwhile it is his own choice to eat meat *“There’s no one to stop me ... okay, initially, parents will try to stop”*, but he never felt a craving to eat meat.

In India, he ate mostly home cooked Indian food, prepared by his mum. Usually the mother did not allow the kids to be in the kitchen as she wanted to finish her job quickly. But on Sunday afternoons, sometimes all three kids cooked for fun. They always had home cooked Indian **breakfast**. In his college years, he packed food from home for **lunch**. After he started working, he ate outside in the canteen, where he had Indian food every day. For **dinner** he ate mostly Indian food at home. After he started working in India, he **ate out once per week** mostly on Friday or Saturday evenings or for celebrations. They visited Pizza Hut or a Mexican or Chinese restaurant. There were not many options for outside food and no fast food at all at that time. Only during the last five years there came up many fast food complexes in Bangalore. They celebrated all festivals at home and therefore his mother cooked special festival food.

Eating habits in other countries

IP n worked for six month in Germany, before he moved to Singapore and he spent some time to visit his wife in UK. In Germany, he ate noodles, soup,

french fries and potatoes, potato wedges, also vegetarian kebabs, pizza, potatoes chips, bun bread. It was hard to find Indian food in Stuttgart. Hence, he mostly cooked dinner at home with his friends and sometimes they had just bread or chips. He had eggs and alcohol while he stayed in Germany, even if it is not allowed due to his parents and to his caste. IP n dropped weight during this time, as food was a concern there. Vegetarian food was sometimes mixed with fish or eggs, hence he did not trust in the vegetarian dishes there.

He visited his wife in UK and stated that food was different there and more tasty. They had sandwiches and vegetarian burgers. In UK, everything was much easier for him compared to Germany.

The relocation

The decision to move to Singapore was easy for him. One main reason was the financial factor as he earns more money in Singapore. He also planned to do his masters, which was cheaper in Singapore than in other overseas countries. In India, there is no opportunity to do it part time in the evening while working.

General information about his life in Singapore

About Singapore, he thinks it is a nice country. The life there is very fast - paced which is alright till he is young, but he does not want such a fast-paced life after a few years and also Singapore is a small country compared to India, so he *"sometimes feel suffocated"*. Therefore, staying in Singapore forever would be very tough for him and he does not think he would do that. He likes to go to temples on regular base and he kept this tradition from India. Sometimes he goes to Little India to visit Perumal temple, spent some time in the temple and then have dinner in an Indian restaurant. IP n did not go to India especially for festivals until now, even if he says he is missing the festivals back home. He might go there in the future to show his little daughter how they celebrate festivals in India.

Most of the Indian people in Singapore are from Tamil Nadu and they do a little more rituals on festivals compared to people from Karnataka. So he and his wife *"don't celebrate the festivals that extreme"*, they celebrate more on the background, mainly by praying or going to the temples. The basic thing they try to do is to wear new clothes on festival days. Celebrating festivals in Singapore is not always easy for them as on most Indian festival days, there is no public holiday in Singapore. IP n said of himself that he is not a very traditional person. He keeps the traditions that his family want him to keep, but for some of these traditions he feels not sensitive enough, so he just keeps them in front of his parents.

Eating habits in Singapore

IP n kept a vegetarian diet and said that his parents would come to know if he eats meat in Singapore, but that is according to him not the reason why he is still vegetarian. He stopped drinking alcohol in Singapore, as he knows what happens after taking alcohol. He underlined to be sure that he will have alcohol in the future when there is an occasion for it. One of the main changes he did was to try NIF in Singapore like **Thai food and a bit of Western food**. He commended: *"I evolved"*. He stated to be **much more particular of eating out in Singapore**.

They have switched to cereals and bread for breakfast in Singapore. Pursuant to him, cooking Indian breakfast is *"more of a mum and wife thing"*, but they do not have time to cook Indian breakfast in Singapore. While his mother feels that Indian breakfast is the best, he does not insist on Indian food, it is also alright for him to eat bread and cereals. It is compulsory for him to eat **lunch** outside. Due to limited choices, he is fine with any vegetarian food he can get. Nevertheless, most of the times he eats Indian food as it is easier to get vegetarian food at the Indian food stalls. He tried a bit of Western and Thai food. Chinese and Malay food he had only by default and said, if there is an Indian stall he would prefer to go there. Overall, he stated: *"only if the queue is a little bigger or if I'm already bored, then I try, go and try other food."* He and his wife cook Indian food for **dinner** at home, mostly rice based. They keep the food for one day and on weekends they cook a bit more for weekdays. His wife mainly cooks, while he helps her with cutting and washing. They used to order Indian food from an Indian family who cooked mass food at home and then delivered it to other Indian families unofficial. Unfortunately, this family does not deliver anymore. IP n asks his mother to cook Indian food when she is in Singapore and helps her with doing the grocery shopping, cutting and washing of vegetables. The mother takes care of the kitchen and cook *"some nice food"* when she is in Singapore, while he and his wife can concentrate on their work. Also now, since his baby is two month old and they do not have much time to cook, he plans to ask his mother to come to Singapore and cook for them. When his mother is in Singapore they eat rice twice per day, for breakfast and dinner, otherwise they eat it only for dinner. He never calls his mum in India for cooking tips because his wife is the "kitchen owner".

During grocery shopping, he prefers the product with the lower price if the quality is good: *"no luxury now"*. But when he earns more money he will go to Cold Storage as the food is fresher - but also more expensive. When his mum is in Singapore, he needs to do more grocery shopping. She brings only a small

quantity of food from India, as everything is available in Singapore in Mustafa and he does not want her to carry too heavy. Before their baby was born, they used to go to Mustafa ones in three weeks, now they reduced to ones in four weeks. He explained that the mums back in India used to cook “*nice food*”, but this habit will be lost in the next generation, which will completely rely on outside food. IP n feels that the cooking habits of the past generation were also a question of money. Now people have more money and can effort outside food, also they have lost the skill to cook as they are all working and cannot spend time to cook.

Once or twice per week, he eats McDonald’s food for dinner in the office, but with his wife or for himself he does not go to Pizza Hut or McDonald’s. **They go to Pastamania occasionally.** He does not miss any food in Singapore and stated to get everything at Mustafa. Even if some of the Indian dishes in Singapore do not have the same quality as in India, but “*you get it*”. Later in the interview, he complained that the only food he is missing and cannot buy in Singapore is “*mum’s cook*”. He explained his parents are the best teachers for life and his mother had the biggest influence to his diet. Since their baby was born they eat less food, due to time lack, so they do not think too much on their nutrition, they started to eat more cereals and nutritious bars. Hence, he sponsors more on lunch.

If he goes out on weekends, he wants to go for good Indian food. Contrariwise, he feels that too much outside food is not healthy and can cause ulcers and stomach problems, as the outside food even in India is too spicy. Therefore, he thinks a proper mix of both, eating out and home cooked food is the best solution. The healthiest food for him is homemade food. Asking for the reason he answered: “*Because I know what I’m putting into the food.*” He could imagine staying in a country with no or less availability of Indian food depending on the money, even if it would be tough. He follows the ritual to visit temples with an empty stomach when he goes in the morning, but not if he goes in the evening, as he cannot be hungry through the day. IP n fasts on some other days in addition. When he fasts, he takes all kind of solids and some fruits, because he cannot stay completely without eating the whole day. They do not prepare special festival food as they do not know how to do. On two major festivals Holi and Diwali they go outside to celebrate and may also eat outside on these days. IP n did not change weight in Singapore.

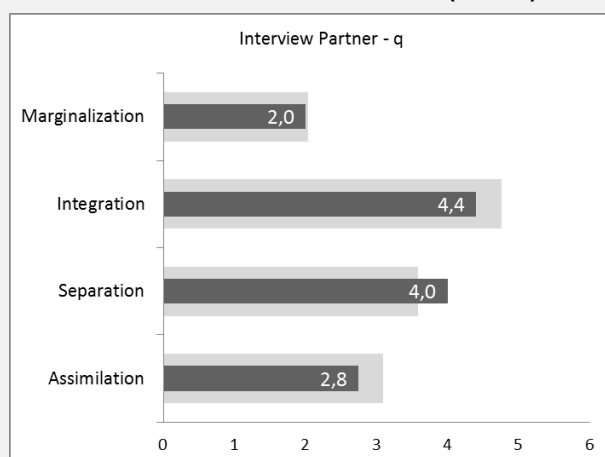
Life situation September 2013: His daughter was born in Singapore in 2010 and he got meanwhile the status “Permanent Resident” in Singapore.

4.4. Interview q

"You can't really just eat whatever you get ... you have to also worry about ah ... so you do end up I guess [IP chuckles] thinking about ... food. And it's probably like, yeah, it's pretty high up the top priority list [smiling]." (IP q, line 271)

Table 29: Characteristics of IP q (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		female				
Age		40				
Marital status		married				
Housing situation		living together with husband and children				
Years living in Singapore		3				
Employment		PhD student				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">cooks more often NIFeats less sweets and fried foodmore noodles and saladsdiet is more health consciousnessweekdays: mostly oats for breakfasteats out less in Singapore				
Affecting Factors		<ul style="list-style-type: none">children: Mexican and Italian food at homehusbandcaste/religion: vegetarianhealth: daily lentils and vegetables, less riceavailability: more fruits and vegetables in SGP, less vegetarian food => less eating outtaste: NIF outside very bland => decreased eating out, less Chinese foodmother: learnt her to prepare home remedies, healthy and traditional food				
Acculturation Indicators		<ul style="list-style-type: none">likes SGPcan imagine to stay forever, but not decided yettry to keep traditions, lower extent due to limited time				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	oats with pears and walnuts	9.00 am	homemade	x	x	
Lunch	chapatis, dhal, beans curry	12.00 pm	homemade	x		
Dinner	gourd soup (pumpkin), dosa	7.00 pm	homemade	x		
Snacks	tea	11.00 am	homemade store	x		
	water bread	& 3.30 pm 4.00 pm	bought	x		

East Asian Acculturation Measure (EAAM)**General information about her life in India**

IP q lived in Chennai together with her husband, her kids and her in-laws. Her parents also lived close by. She taught at university. They did not visit the temples very often due to their packed schedule. The family belongs to the Brahmans caste, but do not follow their caste rules very strict.

Eating habits in India

In Chennai, they ate traditional **breakfast** like idli and dosa. They ate out more often in India due to the higher availability of good NIF, like Mexican food, pizza and Indian-Chinese food. IP q did not cook non-Indian food very often, as they lived together with her in-laws who did not like NIF. Her in-laws were very strict in who is cooking the food. They wanted her to hire a cook from a high caste to make sure the cook is clearly “pure”. Beside this, everybody was allowed to come into their house. She cannot see any relation between her religion and eating habits, except that they were told what to eat on some festival days. IP q is a vegetarian due to her caste and does not eat eggs, but drinks milk. She ate many sweets and fried food in India, because the Prasad is either a sweet or a fried food and if some of their relatives or neighbours had a prayer, they pack the Prasad later on and sent them. Hence, they always ended up to eat a bit of this.

The relocation

They never lived overseas before and moved to Singapore with their two children because her husband was transferred there. The relocation was not so bad for them, because they had visited Singapore a couple of times before and they all liked it a lot. IP q was very keen on doing her PhD and Singapore was a good place to do it, as the universities are very good there.

General information about her life in Singapore

She likes Singapore and could imagine to stay there forever: *"I could, but ah I mean, one can't plan so much. But, yeah, it's definitely a nice place ... very convenient, I find it."* Both of their parents come to Singapore once per year and stay with them for one month. They travel to India once or twice per year.

In Singapore, they visit the temple on their star birthday and for some festivals. She usually lights the lamp in the evenings, sometimes she is too busy with the kids and forgets about it. Her husband does a lot of praying in the morning while she and her helper have to run around to get the lunch or snacks ready. They try to keep their traditions, to make sure their children stay in touch with the Indian culture. All the things to celebrate the festivals are available in Little India: *"So, there's really no excuse for not following the tradition."* [IP laughs.] They have 13 to 14 festivals per year and they try their best to celebrate them. Nevertheless, it is sometimes not easy, as they *"don't get the feeling"* because many people who live around in their age stopped celebrating the festivals as there are no elderly people around who force them to follow these traditions.

Eating habits in Singapore

They are all vegetarians and on particular days, they do not use onion and garlic. She and her husband lost a bit weight since they live in Singapore. In Singapore, she **cooks more often non-Indian food like noodles and salads** due to higher availability and they eat a lot of non-Indian food outside. She **eats less sweets and fried food** in Singapore, as they do not get Prasads from relatives and neighbours there: *"It's a lot more easier to control our diet, I would say, here."* [smiling] They eat homemade sweets, but not on a daily base, mostly for festivals or if someone comes from India and bring sweets for them. Her **diet is more health consciousness** in Singapore. One reason for this is that it is much easier in Singapore to have a healthier diet including fruits due to higher variety and availability. They get all fruits throughout the year while in India they got certain fruits and vegetables only in particular month. About the changes in her eating behaviour, she commented: *"You grow older and you get closer to 40 and [IP laughs] and you want to have more of a healthy diet. So I don't know whether that's ... credit for that can go to Singapore. [IP laughs]. Probably even if in ... if we've been in India, we'd still ... I guess we've switched more to oats as breakfast."* Her husband and her children are quite particular with what they want to eat so she spends quite a lot of time with thinking about what to cook every day.

In Singapore they eat traditional Indian **breakfast** only on weekends, while on **weekdays she has oats most of the time**, her kids eat hummus on wholemeal bread or pita bread and her husband likes to alternate an Indian breakfast with oats, because he gets bored of oats every day. Sometimes she prepares Indian breakfast for him alone. On weekdays, they have chapati for **lunch** while on weekends they eat rice: *"Yeah. Because lunch, usually I make the proper ... you know, Indian food. At least one meal a day is Indian."* Because rice is *"not really that healthy"*, they reduced their rice lunches to twice per week. Three times per week, her husband packs lunch. The other days he packs a snack and has lunch with his colleagues to keep in touch with them. Once per week her children buy food at school, the other four days they pack lunch. She insists her kids to have at least one Indian meal per day. Most of the time, she eats lunch by her own. For **dinner** they usually eat a thick and filling soup and either chapati or dosa with lentils. When her husband wants a light dinner, they cook noodles with vegetables or soup with salad. Her children like to eat pasta for dinner. They **cook non-Indian food like pizza, pasta and Mexican food very frequently, about three times per week, mostly for dinner**. The family's favourite food is Mexican and Italian food. Her kids are very fond of pizza and Italian stuff and she finds it very easy to make. She buys the pizza base and put the ingredients on it, but from time to time, the kids want a pizza from outside, particular when they have friends over. When IP q cooks Italian food at home, it is rarely fusion food because her kids do not like to mix Italian with Indian ingredients. Her daughter learnt at a cooking class in school how to make tacos, so they cook that at home now. Sometimes when they ate a pizza outside, they try to cook the same at home later. The children eat dinner by 7 pm, she eats at around 7.30 pm and her husband comes home by 8 pm and eats.

IP q cooks fresh food every day and tries to cook at least one cup of lentils for her children per day: *"(...) a cup of lentils is a must I feel, because since we don't eat meat ..."*. Also daily one vegetable for lunch and one for dinner are compulsory. She likes to make varieties of different vegetables, buy newer kinds of vegetables and cook them in different ways to disguise the taste. They eat french fries rarely and only in places like Malaysia, where they do not have another option. In Singapore they do not go to fast food restaurants as they have not many food options there as vegetarians. French fries are the unhealthiest food from her point of view, because of the oil: *"I guess I'm sort of hating it even more now."* In general, they **eat out less in Singapore** because most of the restaurant, they found to be overpriced or the food was not tasty. There are only three to four Indian and Mexican restaurants, which they like in Singapore. They go there around once per week. They only try new restaurants

if somebody recommends them: *"I mean, it's too much of a risk [smiling] to land up in a place which doesn't, you know, really cater to vegetarians and you end up wasting time."* In Singapore, it is a bit harder to find vegetarian food in the restaurants. The family's favourite outside food is Mexican. It has quite a few things in common with the Indian cuisine e.g. the red beans and the tomato base. About Chinese food she stated: *"(...) not very much into different kinds of Chinese. Like I ... the Mock meat and all really puts me off."* In general, every food is fine for her as long as it is vegetarian. She does not matter what other people eat around her, as far as she can make sure that she and her family get vegetarian food. When they hired their helper, they made very clear to her that she has to become vegetarian.

When they were in Japan for holidays they ended up eating just bread and butter on some days, because they could not find Indian food. It was ok for them as looking around the place was more important at that time than food. However, being without Indian food on a permanent base *"it will be pretty hard."* There are some days within a year, when they are not allowed to eat some particular food e.g. rice. She knows these rules and tells them to her kids. They have to eat after praying in the temple, before going there it is the best to take a bath. The family celebrates festivals at home by preparing certain dishes, decorate the gods and offer food to them.

The health factor of food is very important for her and she does a lot of research on vegetarian food options, especially for her daughter who wants to lose weight. IP q subscribed to vegetarian Indian websites where she reads mainly recipes rather than information about healthy food, but sometimes they add some little details within the recipe about the health factor of the food. Sometimes it is Western orientated information like which vitamins are in the food and sometimes ayurvedic orientated e.g., which food is good against gas production. She also has *"loads of cooking books"*. Concerning to IP q, her mother had the biggest influence to her nutrition. The mother also gives her advises for the children nutrition.

Her helper buys the packed groceries and fruits at NTUC or Cold Storage. Indian foodstuff she purchases from Mustafa or her husband brings stuff when he is on a business trip in India. Freshness is the most important factor for them when they do their grocery shopping. She buys her fresh green vegetables from a special shop in Little India.

Life situation September 2013: IP q moved to Manila a few month after the interview took place. Meanwhile she lives with her family in Japan.

RESULTS PART B – FINDINGS IN CONTEXT TO THE RESEARCH QUESTIONS

In this part, findings presented in Part A were matched to the research questions.

5. CONTINUITY AND ALTERATION OF TRADITIONAL EATING BEHAVIOUR AND COPING WITH NEW FOODS

Answers referring to RQ1 will be presented in this chapter. The question was:

Did Indian migrants change their eating behaviour after moving to Singapore and if so, in which ways did they change it?

To investigate the dietary acculturation of first generation Indian migrants and answer the first research question, data from the core category „dietary acculturation” was analysed.

To provide a clear structure, identified changes in the participants eating behaviour were clustered into three major groups. Codings for “dietary acculturation” were related to the groups as shown in Figure 20.

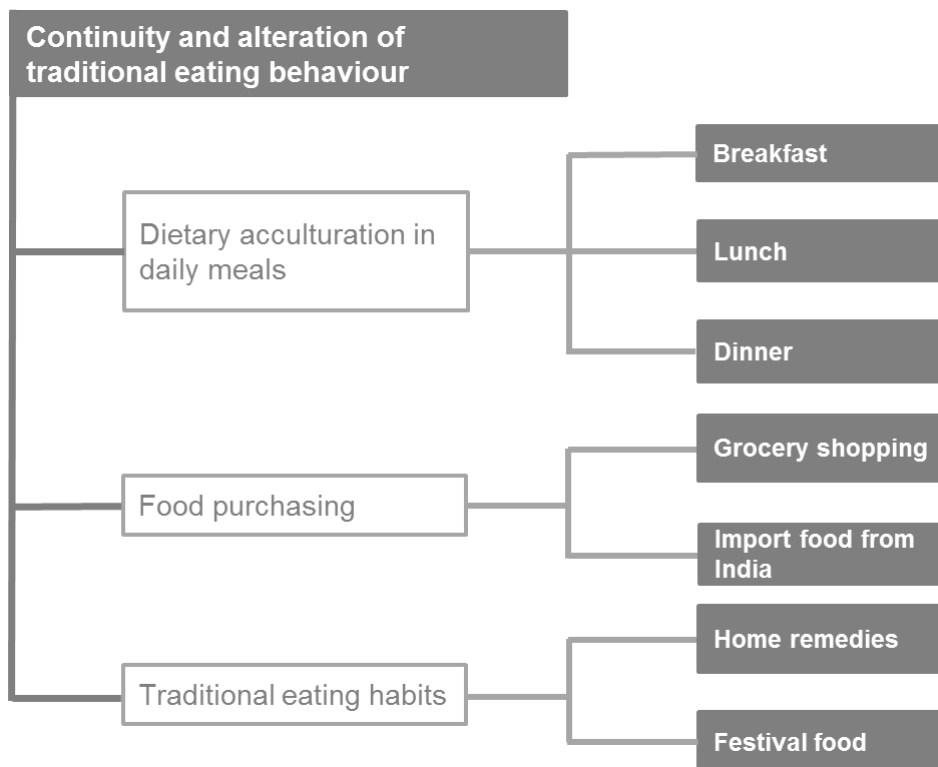


Figure 20: Overview on results structure for dietary acculturation (source: author's own)

Detailed results for each group are described in the following subchapters.

5.1. Dietary acculturation in daily meals

Alterations in the type and frequency of consumed food, as well as in the place of eating and cooking habits were identified as shown in Figure 21.

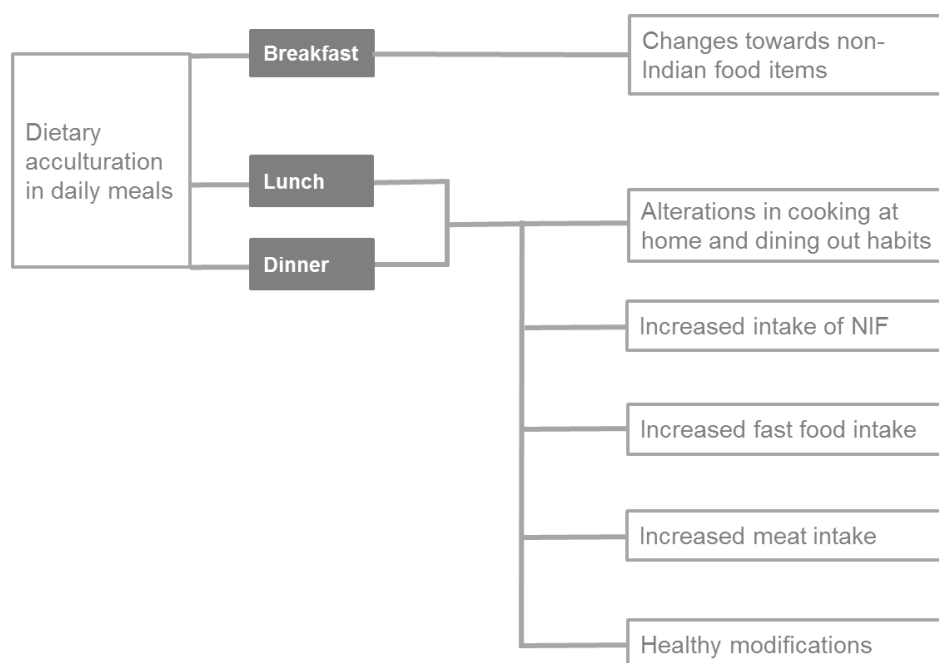


Figure 21: Identified changes in daily meals (source: author's own)

These alterations will be explained in detail within the following subchapters.

5.1.1 Breakfast eating habits

Breakfast eating habits in India

Four participants did not talk about their breakfast in India or overseas. Out of the other 20 participants thirteen ate exclusively Indian breakfast; five had mostly Indian and sometimes non-Indian breakfast. Two of the participants have already lived overseas before moving to Singapore and they had changed their breakfast habits already in the previous countries.

When talking about their breakfast in India the participants named the items listed in Table 30.

Table 30: Indian breakfast items consumed in India (source: author's own)

Indian breakfast items	quantity (multiple answers)
idlis	15
dosa	14
puri	3
chapati	3
pongal	3
rice	4
sambar (vegetable stew)	2
tea	2
coconut chutney	2
curry, sides, roti , pudding , Indian breads, steamed cakes , bread from rice flour, pokora, upma, kelakar chutney	each product was named once

When talking about non-Indian breakfast in India, participants mentioned items shown in Table 31.

Table 31: Non-Indian breakfast items consumed in India (source: author's own)

Non-Indian breakfast items	quantity (multiple answers)
bread	4
toasted bread	2
cereals	2
chocolate malt	1
coffee, Kellogs, Maggi, noodles, jam, butter	each product was named once

Breakfast eating habits in Singapore

Seventeen participants changed their breakfast eating habits in Singapore towards non-Indian food items.

“Ah, yeah, I ... for the first time I tried eating noodles, Kellogg's and ahm ... maybe oats. [IP smiles.] (...) Yeah, breakfast is completely changed. I really regret it.” (IP l, line 234 and 346)

“But there's a lot of change in the breakfast from India to here, mh. [IP smiling.] It's ... here, we have just bread and cereals. But in India, we used to have Indian breakfast.” (IP n, line 172)

“(…) Not in ... I mean, like back home, breakfast would typically be, ahh, chapati ... ahh, idli or dosas. But here, we tend to grab toast most of the times. (...) which we didn't ... it's not a staple breakfast item in India, in a typical South Indian house. So, yeah, that's ... things like that I mean like cereals, toasts, pastas which we've not really been indulging in at such a frequent rate in India.” (IP k, line 26-29)

As shown in Figure 22, for four participants no information can be provided about changes, as they did not talk about their breakfast in India. Furthermore, three interview partners did not make any changes to their breakfast habits.

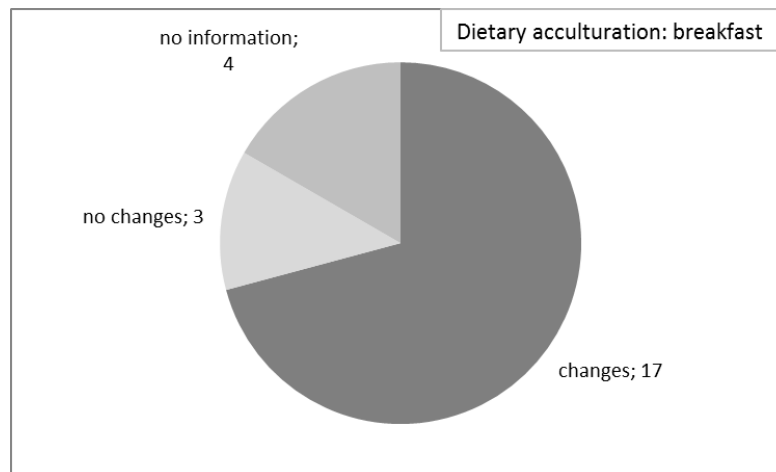


Figure 22: Dietary acculturation concerning breakfast in Singapore (source: author's own)

Three participants ate exclusively Indian breakfast in Singapore. Two of them also ate Indian breakfast in India. The other did not give any information about her breakfast in India.

Eight participants have mostly non-Indian breakfast and sometimes Indian breakfast. Seven of them changed their pure Indian breakfast in India to mostly non-Indian breakfast, and sometimes, Indian breakfast in Singapore. One lived in Bangkok before and changed her breakfast there already to mostly non-Indian. She kept this habit in Singapore and only has Indian breakfast sometimes.

Seven participants ate non-Indian breakfast every morning. Three changed from a fully Indian breakfast in India to a breakfast with NIF in Singapore. Further three had mostly Indian breakfast in India, sometimes non-Indian. One participant stated he had mostly non-Indian and Indian breakfast before only sometimes. He lived in US before moving to Singapore and changed his breakfast eating habits there already.

One participant has mostly Indian food for breakfast in the food court in his company and he eats Singapore items for breakfast only sometimes.

IP I did not talk about her breakfast in Switzerland. In Singapore, she has mostly Indian breakfast, sometimes a protein shake or a sandwich.

IP m has only water in the morning and later an Indian brunch.

Another **three** participants skip their breakfast completely. **IP h** had mostly Indian breakfast in India; sometimes his mum gave him Kellogg's or noodles

with Maggie seasoning. In Singapore, he skips his breakfast completely. Also IP a and IP v skip their breakfast completely in Singapore. IP v said she had mostly Indian breakfast in India.

Three other participants used the term “skip” to describe their breakfast. One said she skipped breakfast in the beginning, but switched now completely to Indian breakfast, as she is living with an Indian family now. Another one says, sometimes he skips, when he is late. And a third also skips breakfast, while he says:

“(…) skipped means I have a cup of milk, I have bread, so maybe a cup of milk and a bread.” (IP b, line 96)

These three are included in the categories “Indian breakfast” and “Non-Indian breakfast”.

Figure 23 shows a comparison of eating habits in India and Singapore.

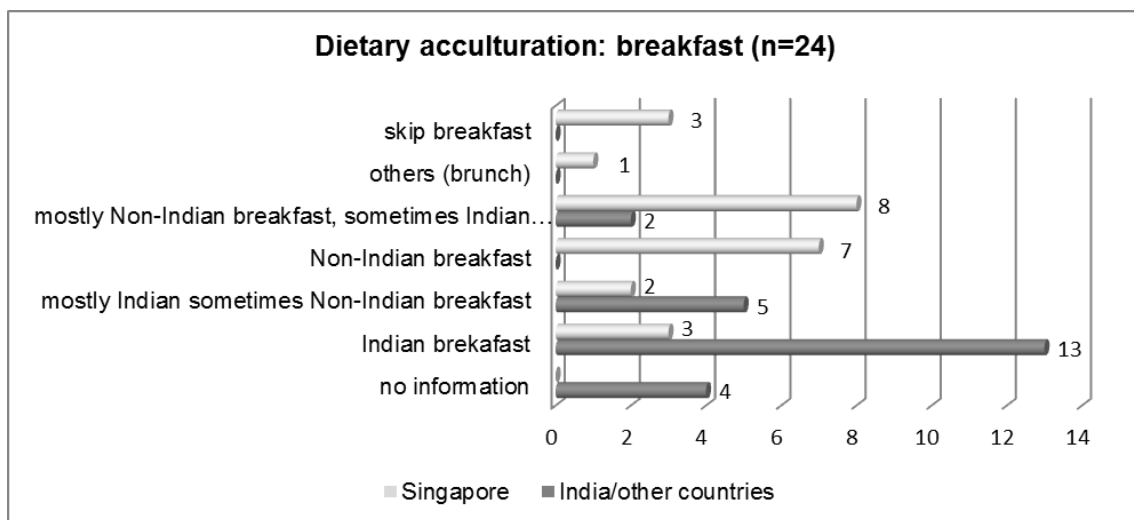


Figure 23: Comparison of breakfast eating habits in India and Singapore (source: author's own)

When talking about non-Indian breakfast in Singapore, participants mentioned the items listed in Table 32.

Table 32: Non-Indian breakfast items consumed in Singapore (source: author's own)

Non-Indian breakfast items	quantity (multiple answers)
bread	15
cereals, Kellogg's, oats, cornflakes	15
toasted bread	5
jam	5
fruits	4
pasta	3
egg	3
cup of milk	2
biscuits	2
butter	2
SGP bread, coffee, Nutella, mayonnaise, honey, barley water, sandwich or protein shake, ready-made cake, buns, donuts, orange juice, cheese, sandwich, Milo	each item was named once

Participants who consume Indian breakfast in Singapore eat the food listed in Table 33.

Table 33: Indian breakfast items consumed in Singapore (source: author's own)

Indian breakfast items	quantity (multiple answers)
dosa	7
idlis	4
puri	1
coconut chutney, uppma, idiyappam, rice	each product was named ones

According to the alteration of breakfast eating habits, the consumption of "Western" bread increased. "Western" bread in Singapore means very common white bread and toast. The consumption of this type of bread is uncommon in parts of India and eaten by participants in Singapore for convenience and a lack of Indian alternatives.

"Hmm, there [in India] I don't eat it [IP laughing] because I get other good food [IP laughing] (...) Yes, she [her mother] always cook for me when I am at home. So I don't need to think about the bread and that's the last choice." (IP d, line 316-318)

"Usually I don't like eating breads because it's very, very rare in ... in my town to eat breads. Western breads." (IP h, line 350-352)

IP h explained that bread is usually eaten in India when someone is sick.

For comparison: Within the 24-hour dietary recall, thirteen participants stated they consumed Indian breakfast. However, one classified "oats with pears and walnuts" as Indian food, one "cookies and biscuits" and twice bread was ranked as an Indian breakfast item. All these items were classified as non-Indian items within the interview. One participant stated he skipped breakfast compared to

three who said within the interview that they skip breakfast. However, one interview partner who stated to skip breakfast did not fill out the 24-hour dietary recall. Another mentioned within the recall that she had some biscuits and cookies for breakfast. Nine interview partners classified their breakfast as non-Indian (eight Western, one other Asian) within the 24-hour dietary recall.

5.1.2 Lunch and dinner: Between cooking at home and dining out

A change towards both - eating outside and cooking at home - was identified among the Indian migrants. When describing both changes, participants can be distinguished into three groups. All single participants or those who are married but living together with flat mates (n=11), have their weekday lunch in food courts. Seven of them started to cook dinner in Singapore. This was interesting as mainly men narrated that they now cook in Singapore. They mostly cook on weekday evenings, while on weekends they prefer to go out for lunch and dinner with friends. They consume their lunch in food courts and most of them were discontent about the quality and variety of food there. They usually choose between Indian, Chinese, Malay, Thai and Western dishes in food courts. Nevertheless, even when they choose Indian food there, it has not the authentic Indian taste and they complain about the lack of variety of Indian, especially Indian vegetarian food in food courts. Hence, they prefer to eat a homemade meal for dinner, even if they state that the taste is not like their mothers cooking.

“So I try those. At the initial it won't be that good. Even I don't eat. [Smiling]. I just throw away. So after sometimes...ah I learn but not as good as my mother I cook.”
(IP h, line 188)

“I generally prepare Indian food only. But I ... I can think about the food which my mum prepares, but can never try them because I don't know how to prepare it.”
[smiling] (IP b, line 208)

But their cooking is at least Indian food and more authentic compared to the Indian food in food courts and also less expensive than outside food.

Participants of this group prefer to cook Indian, especially South Indian food and often get the recipes from their mothers. Typical Indian dishes include rice, dhal, vegetables and traditional Indian spices. Sometimes eggs are included, but they rarely cook meat. If they do so then participants prefer to cook fish or chicken as a weekend special. Especially dosa, chapati, upam or paratha are bought frozen or as powder and then prepared. Vegetables are cooked freshly. Seven participants narrated that they “*experiment*” in the kitchen by mixing ingredients together because they are not experienced in cooking and only started to cook since they live in Singapore, like IP c narrated:

“You have seen your mother cook it so just mix and match and you just cook something.” (IP c, line 157)

Only IP e helped his mother in India with cooking. He loves cooking and his friends in Singapore call him the “*chef*”. Indians who cook together with their flat mates arranged “*shifts*”, so it is everyone’s turn to cook on a regular basis.

Three participants of this group do not cook dinner on a regular basis. One does not like cooking and only cooks “*once in a blue moon*”. Another one stays with an Indian family and is not allowed to cook there. Both participants usually eat dinner outside which includes all kinds of food but mostly fast food. A third interview partner also stays with an Indian family who cooks her Indian breakfast and dinner.

Of the eight participants who cook dinner out of this group, six exclusively prepare Indian dishes for dinner. One sometimes makes pasta and the other one likes to try dishes from other cuisines and says he is cooking 50% Indian and 50% non-Indian food. Most of them cook dinner every evening at home or at least more than three times per week.

However, nine participants also explained that they eat out more often in Singapore compared to India. Those staying with their parents in India had lunch packed by their mothers. Others used to eat lunch at the canteen. Besides this, eating out in restaurants on weekends or evenings was very uncommon for most of them. They eat outside in Singapore for dinner sometimes on weekdays but mostly on weekends. Places where they went for outside food are very controversial. Either they prefer to go to authentic Indian restaurants and look forward to eating a traditional Indian meal or they eat at a fast food chain. Only one enjoys trying other cuisines like Mexican, Thai or Italian. Most of them work in the same company. It is a ritual in this company to order food for employees who work longer in the evening and to have a dinner together. These dinners consist mostly of Western fast food like burgers and French fries with soft drinks and pizza.

The second group of participants (n=8) are women, married and living together with their family. Seven of them have two children each. One is childless. They all cook lunch and dinner predominantly at home. Some of them learnt to cook from their mothers in India:

“I used to because I was the eldest of the four. So I used to help my mother a lot. So I started to learn cooking at the age of 12 to help because ... ah three after me. So my mum had to take care of many persons. So, I used to help a lot. That way, I learned cooking very early. So and ah ... I used to do a lot of cooking at home.” (IP m, line 290)

Others started to cook in Singapore the first time because they followed their husbands to Singapore directly after getting married.

Six women out of this group have a “helper”. The helpers are included in the cooking process with differing intensity. Some are fully responsible for cooking and grocery shopping, while others only assist in the kitchen.

These interview partners cook predominantly Indian or explicitly South Indian food. However, all of them prepare NIF from time to time with different frequencies from three times a week to once per month. When talking about non-Indian food they all mention Italian food, as this is the most favourite food of their children. Therefore, they cook pizza or pasta mostly fresh or sometimes frozen. From time to time, they order Italian food. Two mothers in each case cook western foods like burgers or sandwiches and Mexican foods. Compared to the first group, these women are more open to including non-Indian ingredients in their dishes and try to match them with Indian food. IP o explained that they tried to mix Chinese spinach with Indian spices, which did not come out well. Other participants confirmed the difference in taste also and mostly they prefer Indian spinach. However, IP o found broccoli to match good with Indian food:

“Yeah. Certain things ah go very well, like, surprisingly sometimes, like, broccoli basically is not, ah, locally found and ah not common in India, like in our place. It's not grown. Basically, if you need broccoli it has to be get ... imported from somewhere else. So, ah... we have certain, ah, dishes that we make, which we tried with broccoli here and it turned out well. So we just included that in our list.”
(IP o, line 987-991)

She also tried to include celery into the Indian cooking, which did not come out good. Also non-Indian salads were adapted to the Indian food. The women became aware of the Indian style for cooking vegetables, which are cooked for a long time until they are soft. Some started to reduce the cooking time for vegetables for health and taste reasons while others explained that vegetables could not be cooked less within an Indian dish. Therefore, they started to include more salads in their daily meals to get the vitamins. Another topic between the women was fried food. They prepared fried food only rarely in Singapore, while it was very common in India, especially on festival days or as snacks.

The women are health conscious and when talking about cooking, all of them mentioned healthy modifications in their diet, which they practice since living in Singapore. It is more than just for their own health, they are aware of providing healthy nutrition for their children, like IP I explained:

“I really worry about my children’s, ahmm, you know, ah, more than keeping money for them, I really want them to be healthy.” (IP I, line 965)

Mothers set value on different aspects in the diet of their children, like using ghee, securing a sufficient protein supply or taking care that they do not eat too much fried food and fast food.

Except for one, they all lived in Singapore for seven years or more. Hence, eating out was not very common when they lived in India:

“Ahm, actually when we were, ah, small, like.... the restaurants, they were all more of a luxury. Like, you know, to go out and have this ... I am talking about 20 years ago ... it was more like, you know, it's ... it was a big deal. Like, you know, if you go out and have food, you talk about it for the next one week.” [IP laughs.] (IP o, line 276)

Five of these women did not change the frequency of eating out in Singapore compared to India. They eat out with different frequencies from once per month to once or twice per week. One eats out once per week in Singapore and said this is much more than in India as eating out in India was something very special for them. The one with the shortest length of stay in Singapore reduced her consumption of outside food to once per week or once in two weeks. She does not like the vegetarian choices in Singapore restaurants and said in India, restaurants offered much more variety of vegetarian options. When women of this group eat out, it usually happens as a family event on weekends or from time to time with friends. Besides Indian restaurants, they like to visit Italian, Mexican, Thai or Indian-Chinese restaurants. Some said they are open to try food from all cuisines as long as it is vegetarian. Occasionally, they visit fast food restaurants mostly for the children.

The third group of participants (n=2) includes two full-time working women who pack food for lunch and both eat dinner at home. One of them has a maid at home who is prepares the food. The other participant lives together with her grandparents and the grandmother cooks for her. They both eat exclusively Indian home cooked food for lunch and dinner. One did not change her frequency of eating out in Singapore. Only when she is “*bored*” from Indian food she eats some Chinese food in a food court or restaurant. Otherwise, when her daughter is craving fast food they will go with her to a fast food restaurant occasionally. The other Indian women increased her intake of outside food. Sometimes she has dinner at work, which is mostly fast food or when she is shopping, she will take the opportunity to have some Indian, Chinese or Thai food at a hawker centre.

Furthermore, three participants differ in their habits of cooking and eating out. IP n eats lunch in food courts. He helps his wife to cook in the evening or on weekends by cutting and washing vegetables. IP j packs food from home around three days per week and otherwise eats lunch in food courts as well. He cooked when he lived alone or with flat mates. Nevertheless, since he is married he stopped cooking. They both increased their frequency of eating out in Singapore and preferred to eat Indian food in restaurants together with their family. However since their children are born, they eat out less and one of them said the only option to eat out is in fast food restaurants, because the children can run around there. He narrated that they:

“(...) end up and go to Mc D. [McDonalds] ... almost week ... every week. We used to ... we go to McDonalds or any fast food.” (IP j, line 291)

IP f is part-time employed and she alternates between cooking lunch at home or eating outside, while both have dinner mostly at home. She eats more food from outside since living in Singapore. In India, she mostly packed lunch from home and had dinner with her family at home. Now she has lunch partly outside and in addition eats out with her families. IP f is vegetarian and prefers Indian vegetarian food or alternatively Western vegetarian items. When talking about Western food she names pasta and pizza as well as sandwiches. She does not trust in Chinese vegetarian food and in addition does not like the taste. Also hygiene-wise, she prefers to cook at home whenever she can. However, she states she is not adept with the Indian cooking and just cooks something to eat, which can also be regular pasta with ketchup and Indian spices.

For comparison: In the 24-hour dietary recall, ten participants had their lunch outside the home and two stated they ate out for dinner. One bought dinner from outside and ate it at home.

Gender shifted space in transnational kitchen

Ten men provided interviews. Seven of them cooked dinner in Singapore; one helped his wife in the kitchen. IP a cooks in Singapore very rarely, as he finds all the foods he likes outside. However, he cooked dinner until he lived in Germany due to the lack of Indian food there. IP j cooked while living with his flat mates in Japan and US, but stopped cooking since he is married. Overall, all men who joined this study had cooked before or still cook dinner at the very least.

5.1.3 Non-Indian dishes

This subchapter includes the participants' changing towards a higher intake of Non-Indian-Food (NIF) for their lunch and dinner.

Lunch and dinner in India

None of the participants cooked NIF for lunch or dinner in India. Six participants said they had Indian-Chinese food from time to time in a restaurant and respectively two participants stated they ate Mexican or Western food in India.

Lunch and dinner in Singapore

Figure 24 shows all cuisines the participants had tried for lunch and dinner since living in Singapore. Each participant tried at least one of the shown cuisines. Two participants also mentioned North Indian cuisines when talking about NIF as they found it quite different when compared to their South Indian food.

Eating NIF was for many participants one of the most significant changes in their eating behaviour in Singapore:

"So I cook it the same way and I eat the same vegetables and whatever food that I used to eat back home. Except that the so called Western food has crept into our diet." (IP k, line 31)

"The food changed mh [short thinking] I ... after I come here I learnt to eat Chinese food [laughing loudly], yeah." (IP w, line 185)

"I think now the only way it's changed is that we've included a lot of other things from other cuisines, you know." (IP t, line 161)

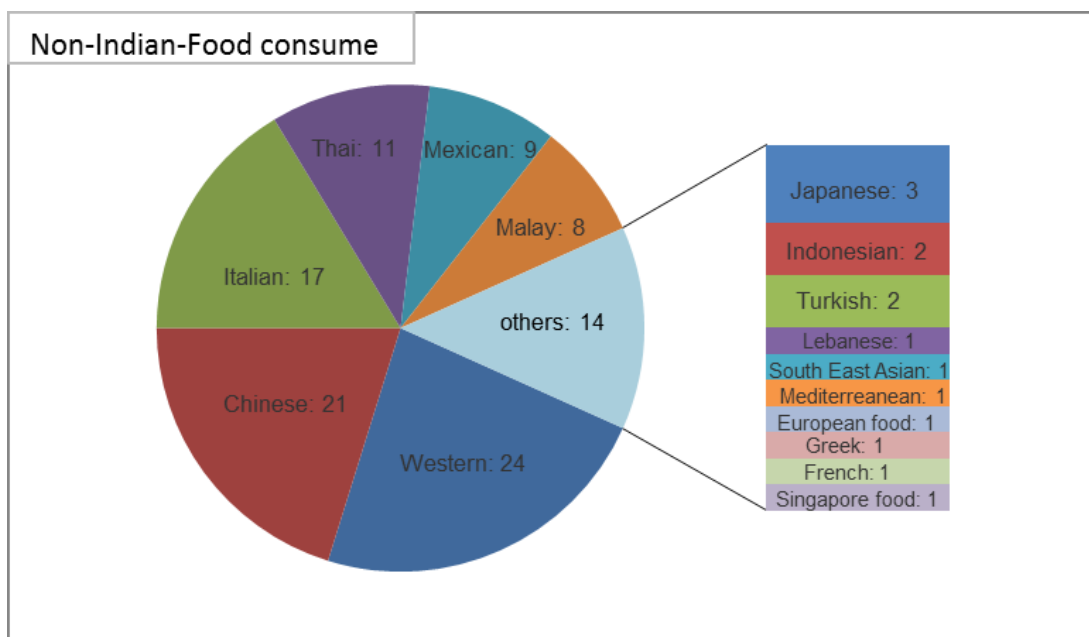


Figure 24: NIF consumed by participants in Singapore (n=24, multiple answers) (source: author's own)

NIF eaten for lunch and dinner by the participants can be divided into two groups:

- Three cuisines: Western, Chinese and Malay food, were mostly eaten for lunch or dinner in food courts or hawker centres. This lead to controversial opinions by participants and these foods were often eaten due to a lack of choice
- Seventeen cuisines, as shown in figure 28 except the three mentioned cuisines above, were mostly eaten with pleasure and enjoyed for lunch and dinner in restaurants or cooked at home

These two groups are described in the following with a focus on Mexican, Italian and Thai food in the second group.

Chinese, Malay and Western food

Based on the participants statements Chinese food was clustered into four dimensions, shown in Table 34 by using the method of “scalable structuring” as described in the methods chapter.

Table 34: Assessment of Chinese food by participants (n=21) (source: author’s own)

	like	like some dishes	can take, but do not like	no comment
Chinese cuisine in Singapore	4	9	7	1

Like: One participant said she likes most of the dishes except the fried Chinese food.

“I love their bee hoons. I just love their bee hoon.” [smiling happily] (IP 14, line 459)

Another one said he likes all kind of food, including Chinese food, but it has to be a bit spicy. A third one stated he would try more Chinese food if there were more vegetarian options. One of them added that he has more options when eating Chinese food.

“I, I think sometimes I have more options in ah ... in some of these Chinese stores, more vegetable options and ah more non-vege options.” (IP p, line 233)

Like some dishes: Nine participants said they like to eat certain dishes of the Chinese cuisine in Singapore. Most of them added they only like some basic Chinese foods or their own Chinese style food, which means not the pure Chinese food:

“Chinese food, we like ... we like some very basic things, like noodles and all that. But not very much into different kinds of Chinese. Like I ... the Mock meat and all really puts me off.” [IP laughs] (IP q, line 347)

One said she enjoys eating it and is fine eating it from time to time, but not on a regular basis:

“I like this sorts of food, maybe just for one course or two course, like maybe for lunch or dinner. But I would like to go back to my normal food [smiling] for the, for the ... others. I mean I cannot continue like this for days together.” (IP x, line 267)

Can take, but do not like: Seven interview partners stated that they can take some dishes of the Chinese cuisine, but do not really enjoy eating it. It is just for filling their stomach.

“Even if I'm very, very rare only to ... if I'm given the choice only to eat Chinese, I only eat very less just to survive.” [laughing] (IP h, line 622)

For *Malay* food only two participants said they like to eat it. The other five participants stated they can take some Malay dishes but do not really enjoy eating them.

The term “Western food” was predominantly used for fast food like burgers or French fries. Detailed results for this will be described later in this subchapter.

Six participants mentioned they eat Western food for lunch or dinner from Western food stalls in a food court or hawker centre.

Italian, Mexican and Thai food

Pizza and pasta were the most mentioned Italian dishes. 14 out of 16 participants enjoyed Italian food. Two classified Italian food as fast food and said they can eat it, but do not really like it. Out of 16 interview partners who said they eat Italian food, ten said they prepare the Italian food at home and most of them do so because their kids love Italian food:

“Oh, we love Italian. My kids can live on Italian. I ... I always think maybe Indian kids in their previous worlds were Italians and so ... because you give them pizza every day, they are happy to eat.” [IP laughs.] (IP l, line 140)

Hence, Italian food was the NIF mostly cooked at home followed by Mexican food. Other NIF were predominantly consumed outside.

Three out of nine participants who eat Mexican food cooked it from time to time at home. One prepared it together with friends and one cooked it together with her daughter, she explained:

“(…) like we've started making tacos at home now, after that, you know, my daughter has a cooking class in school and she learned how to make it.” (IP q, line 580)

Participants living without children (7 out of 11) mostly consumed Thai food as outside food for lunch or dinner. All interview partners eating Thai food stated that they like the food, mostly they said because it is similar to Indian food, especially the curries. None of them cooked Thai food at home.

Although most participants increased their consumption of non-Indian dishes for lunch and dinner in Singapore, Indian food is still their preferred choice as shown in Table 35.

Table 35: Type of food consumed in Singapore for lunch and dinner by participants.
(source: author's own)

n = 24	lunch	dinner
Indian food	8	11
mostly Indian, sometimes NIF	8	6
alternate between Indian and NIF	5	5
mostly NIF, sometimes Indian food	1	1
no information	2	1

In total eight participants, eat exclusively Indian food for lunch:

“(…) yeah 99.9 percent it [lunch] is Indian food. Here we have some 3 to 4 Indian stalls so we will go to one of them maybe ones in a month we go for western like fish and chips those things but usually it will be Indian food.” (IP g, line 380)

Further eight interview partners consume mostly Indian and sometimes non-Indian food.

“So we still ... I mean we do end up eating pasta for like a lunch or dinner or once a month, we do eat pizzas.” (IP k, line 35)

Some alternate between Indian and non-Indian food:

“(…) it's again like ... not exactly like ... I don't go only to Indian, sometimes Indian and sometimes western, yeah these are the two major, and sometimes I go for vegetarian as well.” (IP b, line 104)

Concerning dinner, only one participant said her dinners are mostly non-Indian dishes:

“Evenings normally fast food and things like that.” (IP v, line 412)

Some alternate between Indian and non-Indian dishes for dinner:

“And then, ah yeah, either chapatis or we have other, you know, things like ah ... you know, ah, like dosa, you have a more filling variety made with lentils. (...)”

sometimes we also have noodles or something, when my husband wants to have a light dinner. So usually we try to keep it light. And when you have the soup and sometimes salad as well (...) And sometimes all the vegetables and some noodles or sometimes even pasta, which is now something my kids are very fond of.” [IP laughs]. (IP q, line 182-186)

Others eat predominantly Indian food for dinner and sometimes non-Indian:

“Yeah, I think for [short thinking] ah all around the week [laughing embarrassed] Indian food only. But ahm ... seldom we go to Chinese food courts ... yeah sometimes to restaurants, if yeah ... to yeah meeting someone we go out, too. Otherwise we prefer to eat at home.” [smiling embarrassed] (IP w, line 203)

Eleven participants prefer Indian food for dinner.

For comparison: Within the 24-hour dietary recall, four participants stated they had non-Indian food for lunch and four had non-Indian food for dinner.

5.1.4 Western fast food consumption

“Fast food” within this study is defined as all foods from a Western fast food chain such as McDonald’s, Burger King, Kentucky Fried Chicken (KFC) and Subway as these are the predominant fast food chains in Singapore. Pizza Hut and Pastamania were also classified as Western fast food restaurants. The consumption of Indian fast foods is not discussed in this study.

Western fast food in India

A predominant number of participants stated that there were no, or only a few, Western fast food chains when they left India. Only in the last few years while they are on home trips, did they see more and more Western fast food chains there. It has to be mentioned that many of the participants lived in Singapore for less than six years; hence, the fast food chains came up within this period.

Only two participants consumed fast food generally on the weekend or when they went out with friends in India. Another one tried fast food once before he moved to Singapore and two interview partners said eating Western fast food in India was very rare. None of the other 19 participants tried Western fast food at all while living in India.

Western fast food in Singapore

Only one of the 24 participants does not eat fast food at all in Singapore. All the other 23 participants had fast food at least occasionally.

As only five participants ate fast food in India already, 18 had Western fast food in Singapore for the first time.

Table 36 gives an overview on the participant's fast food eating habits in Singapore at the time of the interview.

Table 36: Frequency of Western fast food consumption in Singapore (source: author's own)

	Fast Food consumption					
n=24	never	Less, sometimes, very rare	< 1 per month	1-2 per month	1-2 per week	> 2 per week
number of interview partners	2	6	4	4	6	2

Six participants ate lots of fast food during their initial phase in Singapore:

"Yeah, first month, almost all the time we eat in McDonald's. Yes." (IP e, line 424)

"McDonald's yeah it was a kind of thing...great food, when I came to Singapore newly yeah, I used to have a lot, once a day kind of thing." (IP b, line 158)

Nevertheless, after a while they reduced the frequency of their fast food intake.

When talking about Western fast food chains McDonald's was mostly named (17x), followed by KFC (6x) and Burger King (3x). Pizza Hut, Moosburger and Pastamania were each mentioned by one participant.

Vegetarians mostly mentioned French fries and apple pies as their most consumed fast food.

Some vegetarians ask fast food restaurants to remove meat from Burgers:

"Same thing, double cheese burger without meat, french fries, green tea or Milo." (IP i, line 1110)

"(...) McChicken or something like that, we just say not put the chicken..." (IP v, line 424)

For others this is not an option:

"(...) if I ask for vegetarian burger they just take out the stuff in-between ... just give me a bun with the lettuce leaves so no point." (IP c, line 254-256)

For comparison: Within the 24-hour dietary recall, two of the consumed non-Indian dinners were meals at a fast food restaurant; no participant ate fast food for lunch.

5.1.5 Meat intake

Twelve participants were vegetarians in India and kept this eating habit in Singapore. Vegetarian means they do not eat meat, fish and poultry at all.

Three of them do not eat pure eggs, while five participants eat eggs only when these are processed within other food e.g. in cakes. Four eat eggs also in pure form.

Three participants were partly vegetarian in India and also in Singapore. One changes her eating habits towards vegetarian and non-vegetarian food on and off.

“Ahmm, ah ... I have ... eaten the non-vegetarian, but now, for the last one ... and a half year vegetarian.” (IP d, line 208)

She stated that she always had periods in life when she ate exclusively vegetarian food.

Two participants are predominantly vegetarians but tried meat out of curiosity:

“(...) once I realised that I had chances of eating meat which I have tried out of curiosity.” (IP c, line 85)

“I’ve been ... I took it maybe, you know, for a ... I already tasted non-vegetarian maybe 50 times, something like that.” (IP i, line 1008)

But both stated that they would never completely change to a non-vegetarian eating style.

Three further participants ate meat in India and still do so in Singapore without changing their frequency of meat eating. IP p ate meat in India whenever he got a chance but at least more than twice per week. He kept this habit in Singapore. Another participant mostly ate vegetarian food in India and followed this eating style in Singapore as well. IP w does not like to eat mutton in Singapore due to the bad quality. However, besides this she kept her frequency of eating meat.

In summary, these 18 interview partners kept their meat eating habits in Singapore.

IP j did not eat much meat while he lived with his parents. But after leaving home he increased his meat intake. He lived in US before and ate beef there, due to a lack of availability of other foods. However, he stopped eating beef once he moved to Singapore, there he eats only chicken and fish. Overall, he did not indicate a higher frequency in eating meat.

It can be seen from Figure 25 that five participants increased their meat intake in Singapore.

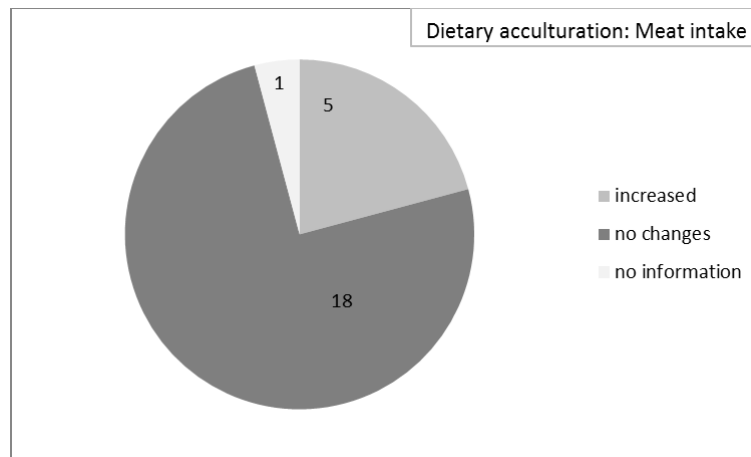


Figure 25: Dietary acculturation concerning meat intake in Singapore (n=24) (source: author's own)

Some statements of participants who increased their meat intake are shown below:

"(...) but after coming here on an average everyday one meal we will have non-vegetarian so yeah that increased a lot." (IP g, line 437)

"Yeah, more, more meat because I ... actually it's like daily I eat meat." (IP h, line 655)

"Of course you could not get all the food what you get in ... in India ... I ... I think yes, maybe yes, because I started eating more non-vegetarian food because I was ... in India like ah ... you get more variety, more choice of vegetarian food. So I think ah [short thinking] I am eating more non-vegetarian food for lunch and dinner ah almost regularly." (IP a, line 110)

"In India of course we do follow something like we do not take non-vegetarian food on certain days and certain periods (...) for example like if it is Monday than we don't take food, we don't take non veg food yeah we don't take non veg that's how we follow but here we have everything every day." [smiling a bit sad] (IP b, line 441)

Table 37 shows detailed changes in the quantity of the participants' meat intake.

Table 37: Comparison of meat eating habits in India and Singapore (n=24) (source: author's own)

meat intake India	meat intake SGP	interview partner (IP)
vegetarian	vegetarian	IP: f, k, l, m, n, o, q, r, s, t, u, v
partly vegetarian	partly vegetarian	IP: c, d, i
meat eating 1 per week or less	meat eating daily	IP h
meat eating 2 per week or more	increased	IP a
meat eating 2 per week or more	meat eating daily	IP: b, g
whenever he got a chance	no changes	IP p
meat eating 1 per week or less	meat eating 2 per week or more	IP e
no information on frequency	no changes	IP w
no information on frequency	meat eating 2 per week or more	IP j
meat eating 1 per week or less	meat eating 1 per week or less	IP x

All nine participants who eat meat on regular basis consume chicken and mutton. Five of them eat also pork and three participants consume beef as well. All three participants who eat beef came from Kerala, one of the few states in India where slaughtering cows is not forbidden.

The husbands of two vegetarians started to eat meat in Singapore and further two vegetarian participants allow their children to eat meat (IP r, IP o). All of them underlined that this happens only outside the home and they would never allow them to eat meat at home.

5.1.6 Healthy Food

More than half of the participants (n=14) partly modified their diet in a healthy way, either by including new healthy food items or reducing food they identified as “not healthy”.

Overall, married women in particular, who lived together with their family, stated they became more health conscious in Singapore:

“Ah ... like, and definitively we have ahm ... modified it a little bit from what we do in India. The same ... same food, same dishes, we have modified it a little bit, to make it even more healthier.” (IP o, line 789-791)

“I guess here it's much easier to get a lot of stuff. So, you know, more health consciousness, probably, [IP chuckles] in a sense. Even there, we were, but here, it's a little bit more easier, because you do get a lot more ah things like a lot more fruits, a lot of different kinds of things.” (IP q, line 136-138)

Table 38 presents the modifications identified as “healthy” by the participants. These were an increased consumption of salads, fruits and vegetables, dairy products, eggs and nuts; and a decrease in the consumption of ghee, oil, sweets and rice. Further, participants identified using olive oil and garlic for cooking as a “healthy” modification.

Table 38: Modifications towards a healthier diet in Singapore (multiple answers) (source: author's own)

n=14	Modification types		
	increased	decreased	new items
Food item	<ul style="list-style-type: none"> • salads • fruits • fresh vegetables • milk • egg • nuts 	<ul style="list-style-type: none"> • festival food • sugar and sweets • spicy food • ghee • oil • rice • coconut and coconut oil 	<ul style="list-style-type: none"> • garlic for cooking • olive oil • eat vegetables • protein drinks and quinoa

Using less or a different kind of oil (n=7) and reducing the rice intake (n=7) were mainly described when participants talked about “healthy” modifications.

“More healthy yeah ahm [thinking a short while] like I made an effort to cook so I know what I am putting inside my food so I just try use less oil or eat more of salads and stuff (...) so now my intake of rice has come down a lot I try to put in more fresh vegetable and fruits in my diet what I eat.” (IP c, line 131-137)

“When it’s a balance of all things. I mean not too much of oil, not too much of rice or anything.” (IP r, line 616)

“We have also changed here. So ... basically we are reducing intake of rice, for me.” (IP o, line 222)

“So even for lunch I have roti and some side dishes. I make it a point to have rice only twice or thrice a week. Not even thrice, twice.” (IP u, line 847)

“... and since rice isn’t that healthy, even in India we have switched over to chapatis during the week and on weekends, rice and ah ... for lunch.” (IP q, line 160)

They substituted rice with wheat based Indian products like chapatis, and coconut oil or peanut oil was substituted for olive oil. IP I changed from white rice to using brown rice exclusively.

Six participants increased their intake of salads, fruits or vegetables. IP e started to eat vegetables in Singapore, as he did not like them in India. Others increased their consumption due to the higher variety in Singapore or because they learnt in Singapore that these foods are healthy.

Participants were also concerned about their protein intake and talked about different protein sources. Two started to consume protein shakes since living in Singapore. One explained that the cow is the main protein source for Indians as it provides milk. He narrated that by not slaughtering cows, Indians show respect to this “*big source of protein*”. Mothers specifically underlined the importance of lentils in the families’ diet as their major protein source like IP q:

“(...) yeah, basically in a day I try and make sure they get at least one source of protein, because we are vegetarians (...) basically I make sure they have some ... a cup of lentils in some form every day.” (IP q, line 281)

IP I started to include quinoa seeds in the daily family’s meals to ensure a sufficient protein supply as her children do not want to eat dhal every day and the family are vegetarians. IP s started to eat more North Indian food as she felt South Indian food does not provide enough protein.

5.2. Food purchasing: From wet markets, online shops and mothers handmade spices

Participants showed a similar pattern when they talked about grocery shopping. “*General items*” which they listed as milk, rice, lentils, sometimes also vegetables and fruits, were bought in Singapore’s common supermarkets. The most frequented supermarket was NTUC, also called FairPrice, followed by Cold Storage and Sheng Siong. For purchasing spices and “*specific Indian items*” the Indian migrants usually travel to Little India. Some of them also had small Indian shops close to their homes where they bought Indian spices. This was the common grocery-shopping pattern for most participants and practised especially for the ones living together with flat mates or alone:

“(...) like maybe vegetables I purchase from fair price. And the only thing is I purchase spices and spices ah spices I go for Mustafa and otherwise like...everything I get from ah FairPrice.” (IP b, line 238)

“Ah most of the groceries are available in the local supermarket as such NTUC or Cold Storage just stuff like that and if I am looking for any specific Indian ingredients I have to go to Mustafa centre but luckily below my block there is this one guy who sells Indian items so he gets it from Mustafa and he stocks it so I generally go and nearly everything I find there.” (IP c, line 113)

A common frequency for buying general items in the supermarkets was once per week or surprisingly also once in two weeks, and once or twice per month for purchasing spices and other Indian items from Mustafa. Participants living together with flat mates buy groceries on their own or in alternation with their flat mates.

Alternatively, some women (n=5) who live together with their family purchase their vegetables once per week or also once in two weeks from the local wet markets. Some of these women (n=3) order their general items like milk, rice and lentils from Indian online shops and buy the fresh produce from the wet markets.

"So you can even call it. You can see the...whatever is available where you need to click and go and see. So I just know what are the things available and I just do it. Because mainly for the heavyweight things like milk, rice and along the way I put all the other [INAUDIBLE] and all that ... so that I don't need to go and ... carry and all that. So milk, they have all the varieties ... trim milk, fresh milk, everything. So I buy cartons and then I keep it. (...) Vegetables, of course we go to the wet market nearby." (IP r, line 545-549)

Women and men, who live together with their families, either do the grocery shopping on their own, together with their husbands or their helper does it.

As another "source" for Indian food, 22 participants import food when they return from visiting "home". In addition, some also mentioned, friends or relatives bring food from India when they visit Singapore. By far the most mentioned items to bring were spices. In most cases, the spice-mixes, called masalas, are homemade by the participants' mothers or mothers-in-law.

Only one participant stated the mother would bring small amounts of spices. The other interview partners explained they bring enough spices to last until the next visit, which will be six months later or sometimes one year.

Other foods the interview partners get from India are sweets and snacks, which are also often homemade. Pickles, chapati and pappadam are some other imported foods.

The quantity of imported foods decreases by the length of stay in Singapore. Participants brought along more foods during their first years:

"When I come first ... first time ah to Singapore, I think ah ... my luggage was about 40 kg. In that I think 25 kg was all groceries. [IP smiling]" (IP e, line 372)

"(...) initially, I used to get something from India. But then you see, everything you get it here. Why you should simply ... because I want to travel free weight, ha, okay. So, and Singapore, you get most of the things. You go to Mustafa Centre, you get everything." (IP n, line 309)

Migrants who lived in Singapore for 3 to 6 years and who started to cook dinner on their own, were the ones who imported mostly spices.

Autonomous socio-demographic influences, participants used occasionally convenience products in their cooking. Mostly named products were ready-

made idli or dosa dough, powder to prepare Indian sweets, Masala mixes, tea sachets and frozen pizza.

5.3. Traditional eating habits

Traditional eating habits like the use of home remedies and the consumption of festival food are meaningful in the Indian eating culture and were therefore examined in this study.

5.3.1 Home remedies

All participants narrated about home remedies, which their mother prepared in daily life or when they were sick in India. The term “Ayurveda” was in general not associated to these remedies. Only two participants explained that the home remedies have their roots in Ayurveda. Knowledge and recipes of home remedies were passed from generation to generation. Two Indian women stated they sometimes read books about Ayurvedic medicine and home remedies. All others learnt about it from their mothers or grandmothers. In all cases back in India, the mothers were the persons in the household knowing and preparing the home remedies. One participant narrated that her father grew the required herbs in the garden to prepare the natural medicine. The term “home remedy” was used for different practices. Preparing special herbs and seeds were named as one possibility to fight disease like fever, colds or stomach problems:

“Maite it’s called, so that seed we have it with yoghurt so it gives a temporary relief for diarrhoea.” (IP f, line 252)

Another practice was the modification of dishes depending on the disease. Participants explained that spices and other ingredients are substituted within the same dish to make it effective for the respective disease like fever or cold:

“I mean it’s in the community basically, the kind of food we cook, we just change the spices in it, like if you have a cold, you put (...) there is this thing called rasam. So if you have a cold, you cook a special kind of rasam. If you have an upset stomach, there’s another kind of rasam. So I, I do follow that.” (IP k, line 185-187)

The third aspect when talking about home remedies was the system of hot- cold system of food, wherein foods are categorized as hot or cold according to their effect on the body:

“Papaya is heaty. You definitely don’t eat it when you’re pregnant.” (IP k, line 420)

“(…) I feel very hot I mean hot in a sense if ahh I am feeling very much restless I will take only court rice, yoghurt rice kind of thing.” (IP g, line 277)

Overall participants reduced the usage of home remedies in Singapore. Two men and one woman do not use home remedies in Singapore at all, as they do not know how to prepare them. The majority of Indian migrants (n=12) indicated they use home remedies in Singapore, but to a lesser extent. Missing the ingredients or incomplete knowledge are the common reasons for this. Concerning the hot and cold food system, one participant remarked that some practises are not suitable to the climate conditions in Singapore:

“So I ... I personally feel back in India, because of the weather, you can still take the ... those things and, like, you know, ah ... but here I feel it's already, like, so warm and, you know, on top of it you take heaty things, you ... I started feeling uncomfortable.” (IP o, line 859)

Furthermore, home remedies are usually not very tasty and therefore not liked by the children, which prompted the mothers to reduce their application. The most common practice was boiling pepper in water for treating phlegm/coughing.

Two interview partners use home remedies alongside Western medicine:

“So even though we are taking the English tablets, we will just take this along with this.” (IP x, line 448)

While two others try home remedies first and if this does not help, they will see the doctor:

“Yeah, first I try to avoid to take these antibiotics. So if it really becomes very worse, I'm not able to cope it up with my home remedies, then I go to the doctor.” (IP u, line 359)

Four women living together with their family and one single man use home remedies commonly when they or other family members are sick. Two refer to their mother for recipes and one gets the remedies prepared by her grandmother. Another said she is practising it for a while already and therefore knows certain remedies. IP k has an extensive knowledge about home remedies, which she learnt from her mother. Among other remedies, she knows how to prepare rasam for different diseases and she practises this when one family member is sick.

One participant did not talk about home remedies at all. Three others only narrated about their mothers' usage of home remedies in India.

5.3.2 Festival food

Indian festivals are an important part of the Hindu culture. Each festival is related to special foods and often, extensive feasts are prepared on the festival days.

Overall participants (n=20) kept celebrating Indian festivals in Singapore to a certain extent. Fourteen of them cooked festival food on these days at home. Most (n=12) women were found to put more emphasis on preparing festival food, while only two men cooked special foods on festival days in their Singapore homes. Five participants visited restaurants in Little India, which serve authentic festival food. IP w is Christian and narrated wistful about the food her mother cooked on Christmas days, but she did not talk about her cooking habits on these days.

Women (n=9) who lived together with their family cooked festival food to a certain extent. Some cooked festival food, especially sweets, just to keep the tradition for their children:

“So that then only the children will know that these dishes exist, right?” (IP q, line 90)

“I celebrate because, you know, children they ask ah Mum, they are celebrating Deepavali in their home, my friend. That’s one ... only for that sake I do it, not just because I am too much interested in it. I bake ... I make one sweet, a traditional one and one, ah, maybe another one and in a simple way.” (IP m, line 172)

While others put a big effort in celebrating the Indian festivals in Singapore by preparing the traditional festival dishes:

“Absolutely. Absolutely. I celebrate it. I make those special food. I keep the tradition alive. Yeah.” (IP l, line 348)

They cook the food according to each festival. All festival dishes include sweets, which are a “*must*” on these days. The foods are also related to the season, so for the festivals in December they prepare “*heaty*” food, as December is cool in their home region. Food cooked for the harvest festival in January includes a lot of sugar and fried foods, as they need calories at this time of the year in India. These festival cooking traditions are still practised in Singapore by some women.

IP s is childless and does follow some traditions on festival days. But she thinks families with children celebrate much more as they want to pass the traditions to the next generation. While she and her husband just follow some traditional practices because they want to attend and not because they have to do so.

Overall women explained rituals for festival food often in detail and felt happy to talk about this topic. Men partly explained general festival rituals and some also knew the dishes served for the festivals, but they were not too detailed in their preparations. IP r and IP q were pleased by the fact that there is no need to prepare festival foods to the same degree as in India:

“So if somebody had a prayer at home and then they offer something to god and then they pack it and send it to a lot of their relatives. So even if we didn't make a lot of things, we will keep having something in the house and ... you know, we end up eating a little bit. And so that way, I think... yeah, that all had stopped here. [IP laughs.] Nobody is giving us anything much. So it's unless we decide to go out or ... we make something at home. It's a lot more easier to control our diet, I would say, here. [smiling] (...) Because most of our, you know, what we offer to a god is usually either a sweet or a fried thing, unfortunately. [IP laughs.] (IP q, line 608-616)

IP r is glad that she has the possibility to prepare sweets with instant powders, while in India they had to prepare everything fresh including the grinding in a mill.

Five participants who cook festival food are living together with flat mates. They enjoy cooking festival food to make sure they “*don't miss our culture.*” However, they prepare also only some selected foods.

Participants who abstained from preparing special food for festivals either did not like to cook, were not aware about the recipes for festival food or had a lack of time, or preferred to visit Indian restaurants in Little India to enjoy a festival dinner.

5.4. Result Summary Research Question 1 (RQ1)

This chapter examined RQ1:

Did Indian migrants change their eating behaviour after moving to Singapore and if so, in which ways did they change it?

In summary, all interview partners changed their eating behaviour to different extents since they live in Singapore.

Breakfast eating habits were changed by 17 participants mostly towards Western style breakfast items (n=14) or it was skipped (n=3).

A change towards both - eating outside and cooking at home - was identified among the Indian migrants. This came along with an increased intake of NIF.

An increased intake of meat was identified especially for younger male migrants (n=5) with a shorter length of stay in Singapore. While all twelve vegetarians

kept their vegetarian eating habits. Most participants (n=18) started to eat Western fast food in Singapore.

More than half of the participants (n=14) partly modified their diet in a healthy way, either by including new healthy food items or reducing food they identified as “not healthy”.

Similar pattern for all participants were examined concerning their grocery shopping. General items were bought in Singapore’s common supermarkets, while spices and special Indian groceries were purchased in Little India, mostly at Mustafa. Some women got their groceries from wet markets (n=5) or online shops (n=3). Especially spices, but also sweets and snacks and other homemade foods were imported from India by almost all participants (n=22).

Almost all women (n=13) continued to use home remedies, although most of them (n=9) decreased the usage in Singapore. Among men preparing home remedies was in general not very common.

6. AFFECTING FACTORS ON DIETARY ACCULTURATION

Answers referring to RQ2 will be presented in this chapter. The question was:

What were the main factors affecting dietary acculturation?

According to Lévi-Strauss there is no culture without the art of cooking and language (LEVI-STRAUSS 1966). As language is often used as an indicator for measuring acculturation, food is likely to have the same significance in measuring acculturation. The only difficulty is embedded in the higher complexity of measuring dietary changes as they are affected by numerous factors.

Affecting factors to dietary changes had been investigated based on the model of SATIA-ABOUTA (2003) (please refer to chapter II.2.1, Figure 2 in this work). However, not all aspects of Satia-Abouta’s model have been considered in this study for several reasons, which will be described in the discussion chapter. Indian mothers, the gatekeepers in the background as described in chapter 6.5., are not included in Table 39. They were identified as an additional influencing factor.

Based on SATIA-ABOUTA’s (2003) model, the following affecting factors have been selected and investigated in this study:

Table 39: Investigated affecting factors on dietary acculturation (source: author's own)

Socio-demographic factors	Cultural factors	Psychological factors	Environmental factors
<ul style="list-style-type: none"> gender age length of stay in SGP household composition; including children marital status working hours former overseas stays 	<ul style="list-style-type: none"> caste religion 	Preference for Indian food: <ul style="list-style-type: none"> trust in NIF emphasis on health food nostalgia cultural identity taste preferences 	<ul style="list-style-type: none"> availability of Indian food in SGP time, convenience

6.1. Socio-demographic factors

This research identified interrelations between socio-demographic data and dietary acculturation. An overview on the affecting factors and the interrelated modifications is shown in Table 40 and explained in detailed in the following.

Socio-demographic affecting factors were identified by generating a matrix, which contrasted dietary modifications and socio-demographic data. Results, which applied to 50% of participants of one group and were in addition unique to this group, are included in Table 40.

Table 40: Interrelation between socio-demographic data and dietary acculturation (source: author's own)

Socio-demographic factor	Alterations in eating behaviour
Age	Younger Indians (20 to 30 years) (n=12): <ul style="list-style-type: none"> increased meat intake (n=4 out of 5) fast food intake ≥ 1 per week (n=6 out of 8) eating lunch outside, mostly Indian, sometimes NIF (n=10) prefer to cook Indian food for dinner at home Age group 30 to 40 years and 40 to 50 years (n=12): <ul style="list-style-type: none"> cooking lunch and dinner at home, Indian food and NIF more healthy modifications

Socio-demographic factor	Alterations in eating behaviour
Length of stay in Singapore	<p>≤6 years (n=15):</p> <ul style="list-style-type: none"> increased meat intake (n=5) fast food intake ≥ 1 per week (n=8) lunch outside (n=11) prefer to cook Indian food for dinner at home grocery shopping in supermarkets and Mustafa body weight changes (n=10 out of 13) importing spices from India <p>≥7 years (n=9)</p> <ul style="list-style-type: none"> cooking lunch and dinner at home, Indian food and NIF more healthy modifications cooking festival food
Household composition Singapore	<p>living with flat mates (n=11)¹²</p> <ul style="list-style-type: none"> increased meat intake (n=5) increased fast food intake (n=5) prefer to cook Indian food or rarely NIF for dinner at home body weight changes (9 out of 13) eating lunch outside <p>living with family (husband, children, grandparents) (n=13)</p> <ul style="list-style-type: none"> mostly vegetarians cooking lunch and dinner daily or >3 x per week, Indian food and NIF grocery shopping in addition at wet markets and online stores importing spices from India more healthy modifications cooking lunch at home or pack
Marital status	<p>single (n=9)</p> <ul style="list-style-type: none"> cooking preferred more Indian food for dinner (n=6) eating lunch outside <p>married (n=15)</p> <ul style="list-style-type: none"> more Indian food for lunch more vegetarians (n=10 out of 12) more healthy modifications
working hours per day	<p>full time (≥ 8 hours per day) (n=15)</p> <ul style="list-style-type: none"> increased meat intake (n=5) fast food intake ≥ 1 per week (n=7) lunch outside (n=12) started to cook dinner, preferred Indian dinner <p>part time or housewife (≤ 7 hours per day) (n=9)</p> <ul style="list-style-type: none"> cooking mostly Indian, sometimes NIF using home remedies more healthy modifications preparing festival food

¹² Flat mates were colleagues or friends of the interview partners

Socio-demographic factor	Alterations in eating behaviour
lived overseas before > 3 month	<p>yes (n=8)</p> <ul style="list-style-type: none"> fast food intake ≥ 1 per week (n=5) shopping at Mustafa and in general supermarkets <p>no (n=16)</p> <ul style="list-style-type: none"> more healthy modifications preparing festival food at home weight changes (n=9 out of 13)

Gender

Ten men joined the study. Overall, five men were found to have increased their meat intake. Fast food was also consumed by male participants to a higher degree. Six men consumed fast food one to two times per week or more. Seven men started to cook dinner by themselves in Singapore. They prefer to cook Indian food for dinner. Men demonstrated pragmatic behaviour when it comes to grocery shopping. They buy all items at a general supermarket and visit Mustafa shopping centre in Little India from time to time to buy spices and other Indian items. Most men (n=9) had lunch outside the home as they work full-time. More than half of the men tend to also eat NIF for lunch, which was mostly Chinese, Malay, or Western food. They had the highest consumption of Malay food (six out of eight) within the whole sample.

Eleven women were vegetarians, hence they provide the predominant number (n=12) of vegetarians within the sample. Seven of them cook both lunch and dinner daily. While they prefer Indian food, they also enjoy to prepare Italian and Mexican and sometimes Western food. Out of nine participants consuming Mexican food, seven were women and out of 16 participants consuming Italian food there were 13 women. Alongside grocery shopping in supermarkets or Mustafa, three women practiced online shopping and six visit wet markets. Overall, women practiced more healthy modifications in their diet and tend to keep traditions alive by preparing traditional foods at home for Indian festivals (n=11).

Age

Overall, age was found to have an influence on the participants' meat and fast food intake as well as on the kind of food they cook and eat outside home. However, these influences had to be considered in relation to other socio-demographic factors that affect the participants eating behaviour. None of the participants in the age group between 20 and 30 years (n=12) had a helper at

home. Hence, they were all responsible for their daily diet by themselves. This created a problem for some participants as at the same time most of them left India for the first time by moving to Singapore. Seven of them lived with their parents in India until they left, one stayed in a convent. Hence, only four participants of this age group were used to taking care of their diet independently. In Singapore eight of them lived together with Indian flat mates, one alone and one with her grandparents. Some participants (n=3) skip breakfast as they do not have time to prepare breakfast in the morning or do not find the ingredients for Indian breakfast in Singapore. Ten have lunch outside in food courts as they are working full-time. They prefer to eat Indian food, sometimes non-Indian such as is Chinese, Malay or Western food. Eight cook dinner at home daily or more than 3 times per week, which is mostly Indian food, sometimes non-Indian. Seven of them bring their mothers' homemade spices from India for cooking dinner. If they cook non-Indian than they prefer meals like pasta with ketchup and Indian spices. They do not put much emphasis in cooking, just "mix and mash" ingredients together to get an Indian meal. Mostly they call their mother for recipes or even to get her advices on the phone while cooking. Counter to this eating behaviour, which is more concentrated towards Indian food, half of the participants in this age group consumed fast food once to twice per week or more and five participants increased their meat intake in Singapore. Most consumed meat once per day.

Participants (n=12) belonging to the age groups between 30 to 40 and 40 to 50 are found more likely to eat Indian food for lunch. More interview partners in these groups (n=7) cook both lunch and dinner at home and are more likely to cook Indian as well as NIF food for dinner. The preferred NIF is Italian, followed by Mexican and sometimes Western Indian food. Healthy modifications within the daily diet, especially in the cooking habits, were preferred in these age groups.

Length of stay in the host country

Interview partners who lived in Singapore six years or less (n=15) were found to increase their intake of meat and fast food. These participants mostly (n=11) ate lunch outside in food courts, which was mostly Indian and sometimes non-Indian food like Malay, Chinese or Western food. For dinner, they preferred to prepare home cooked Indian food. Therefore, they brought spices from India. For grocery shopping most participants from this group went to Mustafa to buy spices and got their general groceries at common supermarkets. Ten

participants staying in Singapore six years or less were found to have body weight changes.

Participants living in Singapore seven years or more (n=9) mostly cooked lunch and dinner at home. While they preferred to cook Indian food they also enjoyed preparing Italian or Mexican dishes, sometimes also Western. Overall Indians staying in Singapore seven years or more practiced more healthy modifications in their diet and tend to keep the traditions by preparing traditional foods at home for Indian festivals.

Household composition in Singapore

Eleven participants lived together with Indian flat mates. Six of them increased their meat and fast food intake since they live in Singapore. All of them have lunch outside, as they are working full-time. Participants living alone or together with flat mates are mostly working full time and their food choice for NIF is influenced by the food range in the food courts or hawker centres, which is mostly Chinese, Malay, Western and sometimes Thai food. Within the interviews, some mentioned that another influence for them comes from their colleagues or by their flat mates who order food at work or make food suggestions for dinner. This was the group with the highest consumption in Malay food (seven out of eight); however, none of them cooked Malaysian food at home. Participants living without children mostly consumed Thai food (seven out of eleven) while having lunch or dinner outside the home. None of them cooked Thai food at home.

Participants explained that for cooking as well as for eating out, they adapted to their friends (which are often the flat mates) and flat mates food preferences:

“Whatever my roommates are cooking, I just need to follow” (IP g, line 184)

“Because dinner, a lot depend on my, my roommates also because some days they are vegetarian. I said they are practicing vegetarian two to three days a week, so that days we try not to cook non-vegetarian and we also stick to ah vegetarian.” (IP p, line 606)

“If my friends suggest me to go over McDonald’s or KFC, then we go over there and eat some burgers.” (IP h, line 608)

Eight of these interview partners started to cook dinner in Singapore either daily, more than three times per week or at least on weekends. They prefer to cook Indian food and rarely they would cook pasta. Three Indians of this group skip breakfast. The new housing situation came along with the lack of time due to fulltime working and the participants mean cooking skills. Before moving to

Singapore, seven participants had lived at home, where the food preparation and purchasing was the responsibility of someone else, usually their mother. In Singapore, they had to take the responsibility for food purchasing and food preparation for the first time:

“Actually till then I think there was no problem with the food or anything as such because anyways, my family was there. Everything was taken care by them. I think only in Sing - when I moved to Singapore, it was - I have to take responsibility of my own.” (IP v, line 54)

“Usually, I'm so used to like my, my mum used to be at home, she used to prepare something. Here, it's like one additional responsibility. It's not only I have to study, it's still like, I have to eat to study, I have to live to study, like that. [IP laughs] (IP u, line 749)

IP h in particular was afraid of this step as he never did “*a single house job*” before he moved and his mother still fed him with her hands in India. Therefore, some of these participants started to eat only two meals per day in Singapore out of time and convenience reasons.

They either never cooked before or they just helped the mother in the kitchen by doing preparation of food or the dishes. Therefore, they assessed that cooking their mother's food would take too much time and be too complicated. Weight changes were quite common within this group with n=9.

Furthermore, thirteen participants lived together with their family which was either the husband exclusively (n=2), or husband and children (n=10) and one lived together with her grandparents. This group included mostly vegetarians (n=10). They cooked lunch and dinner at home on daily base or more than three times per week. Two women packed Indian lunch from home. Participant's favourite food to cook was Indian. However, the participants who lived together with children enjoyed to cook Italian, Mexican or Western food (Table 41).

Table 41: Consumption of NIF in relation to household composition (multiple answers)
(source: author's own)

	Household composition	Living together with family (n=13)				Living together with Indian flat mates (n=11)		Total (n=24)
		With children (n=10)		Without children (n=3)				
		female	male	female	male	female	male	
cuisine	Chinese	7	2	2	0	3	7	21
	Thai	3	1	2	0	1	4	11
	Italian	7	2	2	0	3	3	17
	Malay	0	0	1	0	1	6	8
	Mexican	5	1	1	0	1	1	9
	Western	8	2	3	0	3	8	24

Mostly participants who live together with their kids (six out of nine) ate Mexican food. Out of 16 interview partners who eat Italian food, nine live together with children. Ten participants said they prepare the Italian food at home and most of them do so because their kids love Italian food:

“Oh, we love Italian. My kids can live on Italian. I ... I always think maybe Indian kids in their previous worlds were Italians and so ... because you give them pizza every day, they are happy to eat.” [IP laughs.] (IP l, line 140)

Women in this group used to preparing home remedies for their children, even though most of them stated to use these less compared to their own mothers. Overall, in this group more modifications were undertaken towards a healthier diet and mothers often stated to be concerned with of their children’s nutrition. They tend to buy fresh food from the wet markets or order online and import spices from Indian, which are mostly handmade by their mothers or mothers-in-law.

Family members living together with the participants influenced their food choice as mothers try to prepare something to suite everybody’s taste in the family:

“Yeah. I think, ah, when you are living with the family ... the eating, you have to generally try and balance out everybody-’s needs.” (IP o, line 1127)

“Even if I wanted to eat to survive, my kids and my husband are quite particular with what they want and so I have to spend quite a lot of time, thinking about what we’re going to eat each day.” (IP q, line 267)

When children are living in the house participants often cook or choose food, which caters to the taste of the children:

“Ahm I think now the only way it’s changed is that we’ve included a lot of other things from other cuisines, you know. So, yeah, because the kids like, ah, a lot of Italian and things.” (IP t, line 161)

“(...) ah also the kids play a big deciding factor, because I’ve changed the way I cook food and the kind of food I ... the way I cook the food, according to their tastes and according to their health basically.” (IP k, line 88)

In addition, the husbands affect the type of cooked food in these households. Married women narrated to get up early and prepare Indian breakfast on some weekdays because their husbands do not want to eat oats exclusively for breakfast. Others prepare a light dinner including salads and soups, to suit the husband’s taste.

Six participants stated their children as one reason for consuming fast food:

“For the kids' sake we may go there for some French fries on and off.” (IP r, line 362)

“Sometimes, not regularly [smiling embarrassed], my daughter likes.” (IP w, line 511)

Marital status

The group of the single participants (n=9) included all full-time workers. Hence, in this group all IP's ate lunch outside and started to cook dinner at home.

More than half of the married participants (n=15) were vegetarian (eight out of twelve vegetarians). They tend to eat Indian food for lunch, use home remedies and overall made more healthy modifications to their diet.

However, as being married did not mean that participants consequently lived together with their spouse, the marital statuses had overall less influence as an affecting factor on dietary acculturation.

Working hours per day

Participants working eight hours or more per day ate lunch outside mostly in food courts. They started to cook dinner in Singapore, which was mostly Indian food to enjoy the “*Indian taste*” at least in the evening. This group also included participants who increased their meat and fast food intake.

Part time working women or housewives had time to cook lunch at home. As these women mostly had children, they kept on using home remedies and prepared festival foods to keep the tradition in the family. This group made more healthy modifications in their diet.

Overseas stay before > 3 month

Eight interview partners lived overseas before, predominantly in the United States, Germany or in the UK. These participants have a high meat and fast food intake compared to other interview partners. Some of them modified their diet already in the other countries. They stated that due to all the time they spent outside of India they got used to NIF.

On the contrary, participants who did not live overseas before were more likely to use home remedies, prepare festival food and overall maintain the Indian traditions. Modifications in their diet were mostly found to be healthy alterations.

This group included most of the participants who stated they had weight changes since living in Singapore.

6.2. Cultural factors – caste and religion

As explained in chapter II 5.3.1, the Indian caste system is strongly related to Hinduism and for some Indian traditions, it is difficult to trace their roots exactly to either religion or the caste system. This was also relevant when interview partners talked about the interrelation between their diet, their caste and their religion. Eating habits like eating meat especially beef, eggs, onions and garlic, as well as the social aspects of eating behaviour, were discussed by participants in relation to their caste and religion.

Overall, neither the caste nor the religion influenced the social aspects in the eating behaviour of the interview partners in Singapore. They emphasized eating with people from all religions and castes and vegetarians do not have a problem if somebody eats meat or especially beef beside them, like IP l and IP q explained:

“But I have no problems ... I ... I go to, like, when we go to restaurants ... even with our own friends, like, you know, they would order meat and we would have vegetarian. But I wouldn't eat from their plate.” (IP l, line 895 - 897)

“(...) I mean, for us it's ... it's, I mean ... as long as we get vegetarian food, it's fine. What other people eat around us doesn't matter.” [IP laughs.] (IP q, line 536)

However, vegetarians made sure they never cooked meat in their own kitchens. Twelve participants in this research were vegetarians; three more explained they eat meat rarely. It was remarkable that participants belonging to the Brahmin caste did not use the word “meat”. Instead, they talked about “non-veg” food. Bringing up their children as vegetarians was for some mothers, like IP l and IP k, an important issue and they compared it with drinking alcohol and smoking, like IP l explained:

“... so tomorrow then somebody might come and tell them it's okay to smoke, you know.” (IP l, line 942)

Both mothers were also found to be very religious. IP o and IP r put more emphasis on being vegetarians by themselves, while they allowed their children to eat meat. At the same time, these mothers did not go to temples or practice puja on a regular basis.

Some participants confidentially constituted their meat eating behaviour with their caste:

“Ok I am born in a cast where we are allowed to take Non-vegetarian.” (IP g, line 491)

“According to our caste we do not eat beef.” (IP h, line 272)

While others did not differentiate between the roots:

“So the religion and caste as a whole, ahh, won't imply on any other nutritions except the meat.” (IP i, line 1050)

“I'm born Hindu and a Brahmin...I [short thinking] I'm a vegetarian. That, I have not changed a pure vegetarian. I've never tasted eggs also.” (IP m, line 155)

Another group of interview partners explained their parents' and grandparents' generation are vegetarians due to their religion or caste. They still follow this behaviour but due to their own choice or because they are not used on the smell and taste of meat:

“Meat is due to Hinduism. For me, it's by choice.” (IP o, line 352)

“So its not very religious, its not religious whereas its just that we grew up that way and we have no inclination to try anything else, so that kind of limits are habits so.” (IP s, line 103)

“Ah I...probably due to my parents it was due to religion, because we ah we are Brahmins and ah my parents are and so that's how they are. But they brought us up vegetarians, we never...taste it. And as we...grew up, I don't have a taste for eating.” (IP s, line 208)

For Hindu interview partners being vegetarian or eating less meat often also resulted from moral and ideological reasons. They did not like the idea of being responsible for the death of animals. Also non-vegetarian Hindus narrated they do not feel well after the consumption of meat, especially beef. Like IP d, who explained she still feels the beef in her tummy after eating it. Contrariwise, IP p, one of the two Christian interview partners who joined this survey, explained about his point of view in this topic:

“Catholic, okay. [short thinking] Ah ... we are taught that everything is created for mankind, so we, we don't find it so difficult to, to kill animals I guess or we don't care about it because we are told that they all are created – God created everything for man. Man is a superior creation.” [IP smiling] (IP p, line 486)

Non-vegetarians also talked about their meat consumption from the environmental context. They tried to eat less meat as there is an “*overexploitation by the humans on other living beings*” and the whole world cannot be fed with meat. IP p argued that he does not have a problem eating meat from his ethnic point of view, but is aware of the high carbon dioxide emission which is caused mostly by the cattle.

While vegetarians strictly continued to abstain from meat in Singapore, the abstinence from onions, garlic and eggs was handled less restrictively. Some vegetarian participants started to include onions or garlic in their cooking even if their parents refrained from using it. IP o explained that she started to use garlic even if it is not allowed due to her caste, but it is healthy. IP e and u increased their egg intake in Singapore others started to eat proceeded eggs in cakes or other prepared foods, but stay away from raw eggs. IP k explained she is not allowed to eat any root vegetables due to her caste, but practices this only for onions and garlic. Otherwise, she would have too many restrictions. Others, like IP q kept the taboo of using garlic and onions to festivals days.

Health and taste were mentioned more often in relation to eggs, onion and garlic than religion or caste. Breaking the taboo by eating these foods was not considered as extreme compared to eating meat.

Vegetarians were overall found to make healthier modifications within their diet. All participants who stated they eat less rice, use less oil or changed to olive oil in Singapore are vegetarians. On the contrary, more than half of the nine non-vegetarian participants increased their meat (n=5) and fast food (n=6) intake in Singapore.

Temple visits for non-vegetarians were related to the meat intake. Most non-vegetarians were not allowed to visit temples after the consumption of meat:

“Yeah. Concerning food, ah for our caste, we don’t eat any ah ... non-veg before you go to the temple.” (IP h, line 222)

“Yeah usually ah there is no clear definition but the thing is usually after taking bath we won’t take anything till we visit the god if we take Non-vegetarian on that day 99 percent we won’t go to the temple unless it is very urgent if we need to go means than only we will just say sorry god and we will go.” (IP g, line 485)

Five out of nine regular meat eaters increased their meat intake in Singapore, which influenced their frequency in temple visits and hampered keeping religious fasting periods. Two of the meat eaters started to eat beef. While their parents do not consume beef, the interview partners broke this taboo. Both of them stated they are not very religious.

In summary, overall religion and caste but also taste, moral and ideology were reasons for vegetarians to stay away from eating meat. However, the husbands and the children of two interview partners started to eat meat in Singapore. Non-vegetarians felt that an increased consumption of meat is not good for their well-being and for the environment. But religion and caste were no reason for them to keep their meat consumption low. The less availability and variety of

non-vegetarian food in Singapore was complained about predominantly by non-vegetarians, but also by some vegetarians. It made it hard for them to keep a low-meat diet or meat free fasting period, which they adhered to for religious reasons. At the same time, it had an influence on the frequency of temple visits. Other diet-related traditions like the tabooing of onions, garlic and eggs partly lost importance in Singapore due to health reasons.

6.3. Psychological factors – the preference for Indian food

Participants indicated a strong preference for traditional Indian foods. Results for dietary acculturation in daily meals showed that participants included NIF in their diet, but the predominant number of meals for most interview partners was Indian food. Thirteen participants explained that Indian or South Indian food is still their favourite.

In summary, preference for Indian foods seemed consistent regardless of participant's demographic characteristics. SANJUR (1982:137) explained that *“food preferences coexist with sets of other attitudes”*. In this research five principal factors, trust, health, food nostalgia, cultural identity and taste served as the basis for the participants' preference for Indian food.

6.3.1 Trust in NIF

Lack of confidence in NIF constituted a reason for eight participants to prefer the consumption of Indian food. They expressed mistrust against food in fast food chains and food courts. Reasons for this mistrust were the quality of the oil, the vegetarian concept of Chinese food and the general quality of food in these places.

The quality of oil used in food courts and fast food chains made participants sceptical. They heard from friends or tasted themselves that the oil might not be fresh like IP d explained:

“ (...) because if they [fast food chains] fry something in oil and they reuse that oil again and again, it may not be so good for health.” (IP d, line 762)

Three participants narrated that they do not trust vegetarian Chinese food as their vegetarian concept is different and they cannot be sure they will not serve non-vegetarian food in terms of meat or animal fats within the food.

“Ahm I don't know ah I cant say I am really open to food because, I mean open to all kind of, because if its something that I can trust like a bread sandwich or like a soup or pizza, all Italian food or pasta it does not matter its fine but if its Chinese food I am not really sure whether there is seafood or there is meat or ... because they don't really share between fish and vegetarian food, because its that particular

vegetarian concept its not available whereas in western food there is they exactly say what's meat and non meat so I am generally suspicious of food where meat is mixed with vegetables so I tend to play safe." (IP f, line 270)

Other vegetarians also showed this lack of confidence in vegetarian food when they travelled for holidays. Vegetarian interview partners f and q explained that they used to bring bread and butter during their holidays in Malaysia and Japan, to make sure they eat vegetarian food.

A bad experience with rotten food, prevented interview partner b from trying further NIF:

"(...) within one hour it started showing the reaction kind of thing. (...) after that I have not explored much of other kinds of food." (IP b, line 52)

IP w reported a similar incident in a fast food chain. After this, she and her family reduced their visits to fast food restaurants.

6.3.2 The emphasis on health

"Tamilians, we believe ... that what we consume is very important especially because we all ... Hindus, we treat body as the temple where the ... spirit is living" (IP m, line 394)

This statement from IP m elucidated the strong relation for Hindus between health and diet. Participants overall put an emphasis on health when choosing their food. While some of them like IP f, IP b and IP u underlined that their parents were already concerned about a healthy diet during their childhood, health consciousness based on the traditional medical system was identified for most participants, like preparing home remedies, confinement food or cooking based on the hot and cold food system.

Participants indicated the health communication in Singapore increased their awareness of a healthy diet, which is based on the Western medical system. Health communication either interpersonal or via media was based on Western information. Recipes from Jamie Oliver, information from the BBC health check or reading food blogs from "the pioneer women" in the US were some sources mentioned by the migrants. Surprisingly there was no difference between participants with children and those living with flat mates. Indians from both groups narrated they exchange information about healthy diets and food items with friends, flat mates and colleagues. Reading about healthy diet recommendations in the newspaper was also a source for some of them. However, most Indians in this study used the internet to do "*research*" about healthy nutrition. They "googled" about the health factor of vegetables, protein

sources, weight loss or overall health topics. Some also subscribed newsletters to receive information about healthy diets on a regular base.

Participants paid the highest attention to their supply of proteins, fat and carbohydrates. This awareness of a healthy diet affected the participants' food choices.

They got awareness about the benefits of a high consumption of fruits and vegetables, which leads them to increase their intake of these foods and to prepare at least some vegetables that are less cooked.

The high content of oil in Malay food and fast food was a main reason for avoiding these foods:

"And very little non-greasy option there either. So I don't venture for Malay food."

While the - from some participants' point of view - low content of protein in Indian dishes was balanced by substituting, changing to other foods or even including meat at least in the children's diet.

A high awareness of carbohydrates was common within the researched group that resulted in a reduced intake of rice and a substitution with wheat.

Some participants explained Indian food is the healthiest among all cuisines:

"I prefer Indian food, ok normally taste point of view ok even for health also I prefer Indian food." (IP g, line 427)

IP b explained that his energy needs are better fulfilled by Indian foods. Others stated they know what Indian food brings to their body and therefore they prefer to eat it before food from other cuisines:

"(...) I know which food is good, which food is bad, how to prepare it [Indian food]. And, hmm ... I'm more familiar with each of them. If I eat rice, I know how long it takes to digest and what it gives me, weight thereabout. But if I eat something else, I don't know what is in the ingredients, I don't know how to cook it, I don't know what do I get from it (...) (IP d, line 518)

For some participants health was often found to have a stronger effect on the migrants eating behaviour than religion or taste:

"(...) when it comes to food. Ah ... in ours [caste] we don't take garlic ... which I find is not good, because garlic helps. That's good for the heart ... basically it's good for the heart. I do try to ah include garlic in the meals. We basically as a habit, we are not used to the taste and the smell ... since childhood. But now it's more like it's good. So you have to have a little bit. So ... we try and use it in our food, wherever we can. Yeah. Because I ... I do make Italian food like pasta and ... I do make at home. So ... when I'm making, I just add a little bit of garlic." (IP o, line 338 - 342)

IP i stated that he does not like his non-Indian breakfast in Singapore, but he eats it because he believes it to be healthier than traditional Indian breakfast. IP u started to eat Chinese food. While she does not like the taste and the consistence, she admitted:

“Once I came to Singapore, when I saw all these Chinese food, all these things, right, I know that it's good. Actually they eat it quite raw and it's all boiled and all those things. Ah, but still, first, I was not able to accept the fact. But then later, I felt that yeah, when I, when I compare and so, yeah, there's a lot of oil added inside Indian food which is not really that good.” (IP u, line 509)

Some interview partners knew it was important to consume healthy food, but they cannot manage to implement changes towards a healthy diet. IP p explained he needs to eat more fruits but is not used to this and often just forgets to eat fruit. IP g talked about the benefits of reducing oil within his diet as his father died from a heart attack. IP u explained she should reduce her sweet intake to prevent high blood sugar. Both did not manage to change their eating habits in these points.

Although participants independent from socio-demographic influences showed a strong interest in a healthy nutrition, married women who lived together with their families and mostly with children were found to implement healthy modifications within their diet more consistent. Reasons therefore might be their higher availability of spare time as well as their concern about their children's *health*.

6.3.3 Food nostalgia

Food nostalgia was a common theme among the interview partners. Dishes prepared by the mother back home in India were missed mostly. Especially men and those women who lived together with flat mates expressed a longing for authentic food from their home region or handmade food by their mothers. These foods represented an emotional attachment to their homes. Interview partners cannot duplicate these dishes in Singapore either because they do not exactly know the recipes or they do not have time and it would be too complicated. They missed mothers home cooked food. Some talk about their favourite dishes of their mother very enthusiastic or sad:

“We ... we miss ... a lot in Singapore because, ah, first thing is [short thinking] something mother prepare, we cannot prepare here or you need a lot of time to prepare.” (IP j, line 239)

“My mum used to make this vegetable biryani. I used to love it a lot. That exact taste whatever she used to make, I can never get it and even here.” (IP u, line 337)

Participants stated that almost all Indian foods are available in Singapore, but the taste is not same as in India:

“From the commercial point of view, I get everything, but obviously you’ll be missing some recipes you make in your house ... my ... your mum makes.” (IP l, line 456)

“Some items which are prepared from my home garden usually I cannot get that taste ... ok I don’t know I will feel better if I ... if the vegetables are grown in my garden.” (IP g, line 313)

As a result of this food nostalgia, Indian migrants related their home trips to the consumption of authentic and or homemade Indian food and were looking forward to it. Food was supposed to be one highlight of home trips:

“By the time I reach airport, I’ll be thinking what to eat.” [IP laughs] (IP d, line 384)

“(...) This [Obbattu] is one of my favourite food, so every time I go, she will prepare this.” [smiling very happily] (IP b, line 472)

This often resulted in a weight gain during the home trips.

Parents and parents-in-law visit married interview partners who live with their family, usually on a regular basis, which is in average once per year and they stay in Singapore for at least four weeks, often longer (interestingly, participants who stayed together with flat mates, were rarely visited by their parents). Participants are looking forward to these visits, as the mothers and mother-in-law will take over the responsibility for the cooking during these times. They prepare traditional Indian dishes for breakfast, lunch and dinner:

“Obviously, I miss mum’s cook. That’s why when my mum comes, I ask her to cook that.” (IP n, line 504)

These nostalgia for Indian food motivated interview partners, who lived together with their flat mates, to start cooking dinner in Singapore. This allowed them to get the “*taste of home*” at least in the evenings. Even if they stated the food was not the same as the ones, which their mothers cook at home.

Overall, Indian men and single women expressed food nostalgia more often and tend to feel more longing for Indian dishes made by their mother. Indian women who lived together with their family and were housewives or working part-time, seldom talked about food nostalgia as they can find all ingredients in Singapore and cook these dishes by themselves.

Food nostalgia also triggered Indians in this research to import food from India when returning from home visits, which was often home cooked food by their mothers or homemade masalas.

6.3.4 Cultural Identity

The issue of cultural identity is closely linked with preferences for Indian food. Participants indicate that they grew up with these foods and cannot imagine resigning from them for longer:

“Ah ... so if there wouldn't be Indian food, you can have ... [short thinking] it's something I've grown up with ... this kind of food. So if you want me to eat, maybe eat another kind of food, a cuisine once a week or every week, once in a week, it's fine. But if you ask me every day, every meal, I can't do it. Nor could my kids. I'm sure they wouldn't ... nor would my husband.” [IP smiles] (IP k, line 78)

Indian food symbolized to participants a “sense of belonging” to the Indian culture and “Indianess”. Participants varied slightly in the degree of importance given to cultural identity. Three Indian migrants explained they are not very traditional and when talking to them about the importance of Indian food, they expounded that they are not “*too particular*” about eating Indian food, they “*just eat*” no matter what. However, later in the interviews they explained that they started to cook in countries where they lived before and could not get Indian food, another one of them said Indian food is “*comfort food*” for him when he is sick.

When asking questions about the importance of Indian food for them or how they would feel staying in a country without Indian food, answers indicated a deep affinity for their traditional foods. Most interview partners could manage eating non-Indian food for one or two weeks easily. After this period, interview partners indicate it would be very difficult for them to stay without Indian food and they would start to miss “*something*”:

“I really can't think of, ah, yeah, it's really difficult for me. Okay, you can survive. But it's really difficult, Germany, Japan ... it's really difficult.” (IP i, line 946)

“Ah ... I can't live without Indian food for more than one week. So for one week, even if I eat breads and other stuffs, I cannot ... ah after that, it's really difficult for me.” (IP h, line 350)

Even if they would survive, IP i explained:

“Yeah, I can. I can survive, but that is what I've told you, you know. Surviving is different from pleasing your tongue.” [IP laughs] (IP i, line 948)

Also rice is one of the items where intake has been reduced by some participants, it is, together with spices, also the food which is mostly identified with the “*taste of India*”. Most of them said they would miss rice and Indian spices:

“Ah ... so mainly I can't live without rice. Even if it's Chinese rice also it's okay. But without rice, it's very very difficult for me.” (IP h, line 354)

“But other times, like, you get craving. Even the body, like, we don't take rice, what, 3, 4 days. You feel like ... even if you had a good Western food, your body or your mind or you feel like you are missing something. (...) like if you don't have rice, you'll feel like you're missing some basic.” [smiling] (IP j, line 361-363)

Participants who did not reduce their rice intake still name rice as a staple Indian food and eat it on a regular basis:

“(...) we normally eat rice, which is our staple.” (IP l, line 126)

“(...) we are rice eaters basically, so we still have every meal is rice, like our lunch and dinners are always rice, with a dhal and a vegetable.” (IP k, line 36)

Indian food was associated by the interview partners with home and gave them a relaxing effect:

“We call it rasam. It's almost like a soup. That's like soul food for us. Any day it's like very, very, very relaxing and soothing. And, you know, like where ever you travel, you come back home you don't want anything else ... just that one simple meal.” [IP smiling] (IP o, line 476-478)

Interview partners created individual methods to ensure an Indian diet during overseas stays. IP k always stayed with her family in a serviced apartment when they travel, so she can prepare at least one Indian meal per day. IP w imported a rice cooker and shipped Indian food to Romania for a two-month stay. IP r explained:

“Once we were in the U.S. in Colorado, my husband had some training. So we were high up in the mountains and so the organizers, they told us, you are Indian so you have to carry your own rice and spices before you come here. So we just took it. So there really I couldn't find anything there in the...the grocery shop so I was really thankful to the organizers, you know, for telling me to bring [smiling] all my spices and all that.” (IP r, line 502 - 504)

Migrants who identified themselves as *“traditional person”* were found to cook festival food in Singapore to a higher extent compared to others like IP u stated *“so that we don't miss our culture”*. IP h and IP i explained they are very traditional but cannot show or live their traditions completely in a modern world like Singapore.

Participants who lived overseas before for longer stated not to have a problem without Indian food. They like Indian food and they would prefer to eat it but they do not have too many difficulties to adapt to NIF. From their experience in other countries, they knew they could manage this situation, even if they indicated they had cravings for rice and other Indian foods. Some of them

started to cook overseas and brought rice and Indian spices from India, others said they could live also with NIF exclusively. These interview partners mostly mentioned food would not be a reason when choosing a country to relocate.

Being raised with a certain food and learning to enjoy the traditional food while growing up was given mostly as an explanation for being vegetarian, including the disliking of eggs.

Subtleties in phrasing choices of participants such as, “*my foods*”, (IP c, IP d, IP k, IP r, IP u) or “*our foods*”, (IP g, IP i, IP o, IP p, IP t) reflecting a feeling of ownership and belonging to the ethnic group of Indians are evident in many responses.

Maintaining cultural identity through Indian food was not only considered important among participants for themselves, but also for their children. IP k said:

“So I want them [her sons] to relish it and continue ... I have two boys, so I don’t know if they’ll end up cooking and learn to. I hope they will. But for them to continue the tradition in their house, I want them to be aware of the food, that we make and then we eat and associate it with Indian-ness basically.” (IP k, line 96)

Mothers who stated they belong to the Brahmin caste (n=4) were more eager to keep and forward the Indian traditions including food compared to mothers from other castes (n=4).

6.3.5 Taste preferences

Overall India migrants in this study preferred the “*Indian taste*”. Taste, smell and the raw consistence were reasons for them to avoid Chinese food:

“No, I can’t stand the smells. [of Chinese food] It’s too strong for me.” (IP l, line 320)

“I don’t actually even the smell, I don’t like the smell of the pure Chinese food.” (IP h, line 620)

“And Chinese food I felt that it’s quite raw. I’m not used to that kind of food. So when I even try, right, if it’s very raw, I feel ... I don’t feel that good. If the vegetable seems to be very raw, I feel [smiling] ... I don’t know. It’s like I’m some cow or something like that.” (IP u, line 291)

Also some participants miss the Indian spices and gravy in Chinese dishes. Hence, they differentiated between “*pure Chinese food*” and “*Indianized Chinese food*” which means they add with gravy and Indian spices:

“Which is very Indianized Chinese food [IP laughs], because they don’t seem to like the authentic flavour that you get in the food court here. For some reason, that

doesn't appeal to the kids too much. So, you know, we end up making it a bit of a mish mash." [IP laughs.] (IP t, line 163)

"Ah ... I do have it occasionally. It's again basically the taste buds probably. We are more palatable ... more used to our cooking, our food. Ahm, the seasonings that they use is different from ours." (IP o, line 1003)

Mexican and Thai foods were consumed because they included the "*Indian taste*" somehow. Participants who stated that they like Mexican food said many components in the Mexican cuisine are similar to the Indian food like the red beans, the tortillas, lentil soup, sour cream and some spices.

All participants eating Thai food (n=11) stated that they like the food, mostly they said because it is similar to Indian food, especially the curries.

Thus, a craving for the "*Indian taste*" supported consumption of Indian foods and contributed in a major way to the maintenance of those foods in their diet.

However some (n=4) participants explained they also eat fast food because they like the taste of french fries.

The taste was a reason to eat French fries at least for four participants:

"(...) because I like the taste of the fries." (IP d, line 754)

"I mean nutrition wise it may not be but it does appeal to the senses at that particular point of time" (IP f, line 168)

6.4. Environmental factors – availability, time and convenience

Relocating to Singapore meant not only a geographical change for Indian migrants. Although, the Indian culture is one of the three most presented cultures in Singapore, interview partners described their new home as very different from where they lived before. Beside the cleanliness and safety they found in Singapore, the Indian food supply in supermarkets as well as in eating out places changed to different extents. In addition, the relocation was for most of them affiliated with a new housing and working situation, which influenced available time for grocery shopping and food preparation. Environmental circumstances will be described more detailed in the following.

6.4.1 Availability of Indian food in Singapore

Overall participants explained to get all Indian food items in Singapore. This statement is especially in reference to Indian groceries. Items, which are not

available in the general supermarkets, can be purchased at Mustafa, as IP 1 explained:

“Mustafa has everything under the sun.” (IP 1, line 264)

Two women narrated they miss poppy seeds, which are a common ingredient in some Indian dishes. The seeds are forbidden in Singapore due to their drug-like effect. Some other interview partners mentioned they miss diverse Indian vegetables or sweets. However, in total they stated they find all food items they need in Singapore. The availability of Indian food groceries in Little India or local supermarkets and small shops enabled the interview partners to maintain a sense of attachment to their home culture. It allowed men living without their family to prepare Indian dishes for dinner.

Talking about the availability of Indian food in food courts and restaurants, participants who live together with flat mates indicated they miss the variety of foods they had in India:

“(…) in India we had a lot of variety of foods. Here I have only 2 choices one if fried rice the other one is naan [laughing]. Only two choice, so today if I had fried rice, tomorrow I should have naan, the next day I should have fried rice. So you usually get like oh my got what is that ... you cannot have it for longer time maybe 6 months maximum. Than later on I try something else or say let me have some fruits and then sleep kind of thing, sometimes I held on this yeah.” (IP b, line 92)

Those Indian migrants who ate out for lunch in food courts complained about the low variety of vegetarian foods in food courts. This influenced the participants' eating out behaviour in certain ways. The most named reason for avoiding Chinese and Malay food were the few vegetarian options in these cuisine. Furthermore, the low variety of vegetarian foods and the big portions of meat in non-vegetarians dishes were termed to be major reasons for the participants' increased meat intake:

“(…) I started eating more non vegetarian food because I was... in India like ah... you get more variety, more choice of vegetarian food. So I think ah [short thinking] I am eating more non vegetarian food for lunch and dinner ah almost regularly.” (IP a, line 110)

Another aspect of availability is the high presence of fast food, which is available in every shopping mall and official place, leading participants to increase their fast food intake especially during their first weeks in Singapore:

“No, that time, I was very new so I was not moving around to all the food courts. And then I was not aware of Indian restaurants surrounding my place. Since McDonald's is available in all the shopping malls and then you can go and eat there. And then also, I, I never tried ah Chinese food or some, some other food

since I know there's fast food. So I think anywhere you can eat." [fast food] (IP e, line 422)

"I try to avoid it. [fast food] But here, you see the lifestyle is such a ... it's very, very difficult to get rid of it. But probably ... I think in Kerala, government even banned Pepsi Cola ... Pepsi and Coke ..." (IP p, line 509)

"So if I ... if I'm going to the NUS and, ah, on Sundays, ah, these hawker food stalls in the university will all be closed. So only this McDonald's will be open that time." (IP x, line 661)

They stated that Western Fast Food is sometimes the only available alternative and that it is easily available everywhere in Singapore.

Most participants explained it is hard when not even impossible to find a restaurant serving authentic food from their home town or home state.

For IP p and IP i the lack of authentic Indian food in Singapore induced them to change to NIF for breakfast or in general for outside food:

"I think I, I always try Malay or Chinese. I'm less strict to Indian food. Because I don't get the authentic Indian food, first of all. Ahm ... second thing is the food courts here is more, more Tamil food, food stalls. Ahm ... it's very different from the, the Malayalam food stalls, the Kerala foods there." (IP p, line 227-231)

Interview partners explained that the best Indian restaurants could be found in Little India. Most participants did not live close to Little India, so it was too time consuming and too expensive to travel and eat there every evening. Hence, they made it a point to travel there from time to time on weekends to enjoy lunch or dinner in an Indian restaurant.

However, availability had also positive influences on the migrants' eating behaviour. At least four migrants narrated they eat more fruits and vegetables in Singapore due to its higher availability and variety (IP e, IP p, IP q, IP c).

6.4.2 Time and convenience

After moving to Singapore, the housing situation changed for most Indian migrants. Either they lived with their parents before and now stayed with flat mates or got married or they had lived with flat mates in India, got married in Singapore and then lived together with their spouses. The ones who worked full-time mentioned they have less time for preparing food, which applied especially to breakfast:

"(...) But ah here, I try to avoid it just because of the convenience. Just to ... just I want to rush to office, I prefer to stick to the bread or sometimes if I'm late, I just skip it. And the first meal is, is only the lunch." (IP p, line 634)

Eating lunch outside, even if they remarked it was not tasty, was more convenient than packing lunch from home.

Fourteen out of the 15 full-time working participants worked in the same company. There it is common to provide dinner for employees who work longer in the evenings. Most of these dinners are fast food from McDonald's, Burger King, KFC or Pizza Hut. While the employed women distanced themselves from eating dinner in the company after a while, for men living together with flat mates it was convenient just to join these dinners. However, most of them made sure not to eat these dinners more than once or twice per week and preferred cooking dinner at home.

"(...) most of the times I ate Mc Donald's or KFC was in the office, because when we work late they order food from office so that's ahm when I would have eaten mostly fast food ah ... or more frequently when I was working late in the office." (IP a, line 158)

"(...) if we are staying late in the office, there is no other version food (...)" (IP g, line 374)

"(...) we stay back in office, the easiest available food is, is McDonald's or KFC or something, so we have it." (IP p, line 490)

Overall convenience was the most common reason for Indian migrants to eat outside, like IP d explained:

"But the big difference is in India, we eat the homely food ... home-made food. But when we come here, less chance to get the food and less time to make the food so try to eat from outside." (IP d, line 712)

Time and convenience were also major reasons for the usage of packed or processed food. In this context, frozen pizzas and ready-made dough for idlis and dosas as well as powders to prepare Indian snacks and sweets were mostly mentioned. These products were used independent from socio-demographics influences. However, participants underlined they use predominantly fresh ingredients for cooking.

6.5. Indian Mothers – Gatekeeper in the background

"To a Hindu son the mother's position is the highest; she is the very emblem of purity. He will never tolerate any indignity shown to his mother by anyone." (BHASKARANANDA 2002:50)

Bhaskarananda's explanation of the relationship between Hindu mothers and sons seems to be reflected in the high status of the mother's food for the male interview partners:

"(...) of course my mum she is a good cook. She prepares very nice food, very health food. Even if I stay there for one or two weeks I put on 5 kilos when I come back." (IP b, line 76)

However also female interview partners admire and respect their mothers for their great cooking skills:

"Yeah, yeah, yeah, she ... she teached me sometime, but ahm ... yeah, I learn now very well, but I don't cook like her, because my mother is a great cook [smiling proudly], she ... she cooks very well Indian foods." (IP w, line 233)

With n=16, mothers were the ones who were mostly mentioned when asking the participants about the person with the biggest influence to their diet, two named the father and one both of his parents.

Although none of the interview partners stayed together with their parents in Singapore, the mothers often remained to be the gatekeepers in the background. This happened in different ways. Mothers gave the participants foods to take with them when they are in India or sent foods via friends or family members:

"Once I go back to India, when I come back, I do get a lot of ingredients from India to cook for myself. And my mum will teach me some new items to cook for me." [laughing]. (IP h, line 186)

These foods are mostly homemade spice mixes, pickles or sweets.

Mothers also trained the participants' helpers in cooking Indian food:

"Yeah, Indian food and even we have a maid here ah she ... my when ... ah my mother was there the last two month and she trained all the Indian food for her. Now she is cooking very nicely." [laughing] (IP w, line 199)

All participants who cook by themselves in Singapore stated they ask their mother for recipes, some even call them directly while cooking to get advice. Interview partners learnt how to cook from their mothers during childhood and now call their mother for recipes when cooking in Singapore.

"Ahm ... I used to help my mum. Ah ...[short thinking] so, now after coming here, if I need to cook something, I'll call my mum and then I'll get recipe and then I'll try out." [smiling] (IP e, line 298)

Women with children get advice from their mothers for their children's' nutrition and appreciate this information and help.

When their parents or in-laws visiting Singapore, the mothers cook traditional Indian food. Usually these visits last a minimum of four weeks, sometimes up to three months. During this time, the mothers or mothers-in-law take the responsibility for the kitchen, including the grocery shopping.

There is high respect to the mothers' traditional knowledge. For example, IP k explained, she does not eat ghee anymore in Singapore. However, once she visits her mother in India, the mother will serve her ghee on the rice *"and you are not supposed to say no, you cannot say no. It's supposed to be rude to say no."* (IP k, line 259)

Mothers still influence the children's diet from far away India, like in the case of IP d:

"Ah ... during that day I was working, so I couldn't prepare any food. So my mother asked me, 'Go to the restaurant and eat all the food', [IP laughs] because they were preparing the Onam feast." (IP d, line 494)

"And when I choose this bread, my mother asked me to take one with the lots of, ah ... ah grains and that ..." (IP d, line 312)

Mothers also experience a high respect concerning their knowledge on home remedies. Even if most participants do not practice the home remedies anymore in Singapore to the same extent as their mothers did back in India, they still follow the advice from their mothers, when they get sick, like in the case of IP e:

"(...) ahm maybe you'll get cold, I mean running nose. Ah maybe sometimes if you go to doctor, maybe it takes one week or something. If something which suggested by my mum side, ah she says use few things and then prepare something and then take, I think definitely one day or same day you can see, you will feel better." (IP e, line 454)

His mother also suggested him to eat vegetarian food for one month to recover from a disease, which he followed strictly. Also, other Indian migrants followed fasting advice from their mothers, like IP w, whose mother told her to stop fasting after she gave birth. IP g's mother told him to fast on Saturdays, so he does. There was also high respect for the mothers when it came to the intake of meat. Vegetarians in particular mentioned that their mothers or parents put a big emphasis on bringing them up as vegetarians. The parents would find out if they eat meat in Singapore and would try to stop them from eating it or would be *"very disappointed"* if they start to.

The research of SATIA ET AL. (2002) indicated that older Chinese adults like mother-in-laws living together with the younger migrants in one household have a significant influence to the household diet. This is confirmed by the case of IP x who stayed with her grandparents in Singapore. She is celebrating festivals more than in India, eating mostly Indian food and based on her results from the EAAM she tended to be separated in Singapore. However overall in this study Indian mothers are shown to have a strong influence on their adult children's diet, even they lived thousands of kilometres away.

Beside this strong influence, mothers mainly build the foundation for the participants' overall eating behaviour. Interview partners, who mentioned that their mothers encouraged them to try also NIF or North Indian food, were found to be more open for these foods like IP p and IP t.

In the contrary to these findings, participants also reported that they convinced their parents to practice healthy modifications within their diet, e.g. decreasing the rice intake or using less oil for cooking.

6.6. Result Summary Research Question 2 (RQ2)

This chapter examined RQ2:

What were the main factors affecting dietary acculturation?

Several factors, namely socio-demographic, cultural, psychological, environmental factors and the mothers back in India were identified to influence the participants eating behaviour to different extents.

As cultural influences, religion and caste were important concerning the intake of meat, but only of minor interest for other eating habits and social aspects in the eating behaviour.

Among the psychological influences, mistrust especially against Western fast food and food in food courts was at least for one third (n=8) of the sample one reason among others to prefer the consumption of Indian food.

The health factor of food was of major importance for the Indian migrants and often resulted in a dietary modification towards NIF. In some cases, the health effect of food was found to have a stronger effect on the migrants eating behaviour than religion, caste or taste.

Food nostalgia and the need to preserve their cultural identity evoked the migrants longing for traditional Indian food at least once per day. These influences were supported by the migrants taste preference for Indian food. Especially Indian spices and rice were associated with familiar tastes from their childhood onwards. Indian mothers, who live in faraway India, supported these longings for traditional Indian food of their children. They were found to have a strong influence to the migrants eating behaviour mainly for the preparation of traditional Indian food or home remedies.

However, overall the migrants eating behaviour was mainly influenced by selected socio-demographic data, mainly the household composition and the working hours. The longing for traditional Indian or healthy food was directed by the spare time, which had been available for the participants to cook or to travel

to authentic Indian restaurants. Participants who lived together with their family got influenced by the eating habits of their spouses and children.

Consequently, to these socio-demographic influences, environmental factors had an important influence to the eating behaviour of full-time working migrants. A lack of authentic Indian food in food courts or Indian groceries in Singapore's supermarkets and the high presence of Western fast food provoked full-time working participants to eat more NIF.

7. EATING BEHAVIOUR IN CONTEXT OF ACCULTURATION

Answers referring to RQ3 will be presented in this chapter. The question was:

Is there an interrelation between dietary acculturation and other acculturation factors?

7.1. Dietary acculturation in daily meals in context of the EAAM results

When viewing dietary acculturation in context to the acculturation process in general, one possible approach is to arrange the eating behaviour of the migrants within BERRY's (2005) acculturation model. Figure 26 shows an approach for classifying the participants' dietary acculturation in daily meals to the four acculturation strategies identified by Berry (2005).

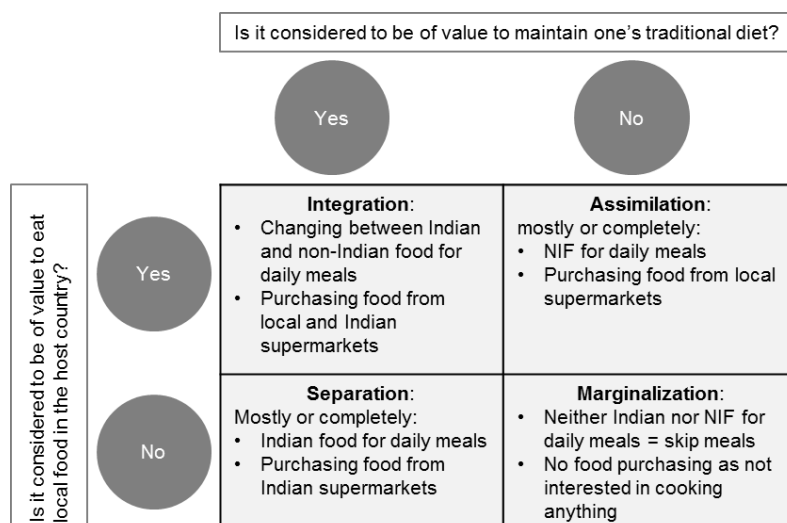


Figure 26: Strategies for dietary acculturation (source: author's own, modified from Berry 2005)

Data from the EAAM as well as from cultural and psychological acculturation aspects were compared to the data for dietary acculturation in daily meals and food purchasing by creating a matrix. An extraction of this matrix is shown in

appendix A35. Changes in traditional eating behaviour were not considered in this approach as they could not be clearly classified to the four acculturation strategies.

Identified Interrelations

A comparison of the results of used strategies for dietary acculturation and acculturation showed that data accorded in nine cases. In ten cases, the used strategies for dietary acculturation and acculturation deviated from each other. Four exceptional cases were found within the data. IP I did not fill out the EAAM. Her case is not considered in the following comparison. Detailed results of the comparison of used strategies for dietary acculturation and acculturation are described in the following.

Accordance: Results indicated an interrelation between eating behaviour and acculturation for nine participants. Six of them tended to be integrated based on the EAAM results. Overall, they also integrated their eating behaviour by maintaining their traditional eating habits and including local food in their daily diet. At least two of their daily meals persisted from partly Indian food and NIF. They bought their food from local supermarkets as well as from Mustafa and most of them imported food from India as well.

Three of these participants (IP g, IP h, IP x) tended to be separated based on the EAAM results. IP x lived together with her grandparents in Singapore. She also showed a tendency to separate concerning her cultural acculturation aspects by celebrating all Indian festivals and visiting temples on a regular basis. Her grandmother is the core person in the household kitchen and she maintains preparing traditional dishes for all meals of the day. She bought her food from Little India or brought it from India, which indicates separation and is again in line with her EAAM result. Even though IP x stated she eats NIF from time to time and she likes her life in Singapore, overall she tended to practice a separated acculturation and dietary acculturation strategy and also stated she would prefer to move back to India one day:

“I like the place, but I don't know how long I can continue here, because I always have a feeling like, ah, Okay, this is not my motherland. India is my motherland. [IP laughs.] I feel like this.” (IP x, line 1050)

IP g and IP h found pros and cons with their life in Singapore, but both planned to go back to India in the future. IP g moved back to India some months after the interview. Both did not celebrate Indian festivals in Singapore but went to temples regularly. Still one said he reduced his temple visits from once per

week to once per month, which was also due to his increased meat intake. His religion does not allow him to visit a temple after meat consumption. Both participants did not like food in Singapore. They increased their meat intake but overall preferred traditional Indian food at least for two meals of the day. However, they both purchase food from local supermarkets as well as from Mustafa and import food from India.

Deviations: Ten participants tended to be integrated from the results of the EAAM. On the contrary, in their eating behaviour they tend to maintain a traditional Indian diet. Eight of them preferred to eat Indian food for at least two meals of the day and two liked to eat Indian food for all three meals of the day, and consequently they tended to be separated in their daily meals. However, even if these participants preferred to cook Indian food for lunch and dinner, eight of them started to change their cooking and eating habits by reducing their rice intake, using less oil, exchanging oil or cooking their vegetables to a lower extent. They also started to cook Italian or Mexican food at home to a different extent. Four women of this group bought their groceries from an Indian online shop (n=3), wet market or Mustafa. This indicates separation as well, since they tend to stick to Indian food sources while their EAAM results indicated integration.

Exceptions: Four exceptional cases (IP f, IP j, IP p, IP v) were found within the data. IP f showed a tendency to assimilation in the EAAM. She found pros and cons in her life in Singapore, but overall she enjoyed her stay there and she is meanwhile a “permanent resident” of Singapore and gave birth to her daughter there. However, except for breakfast she preferred traditional Indian food. She was pregnant at the time of the interview and stated that she preferred Indian food more since she is expecting. The fact that she is vegetarian and Brahmin contributed to her preference for Indian food as well. She stated that it is hard to find vegetarian food in Singapore and she did not trust the vegetarian concept of Chinese and Malay food. In addition, Brahmins have special hygiene restrictions, which she was afraid to disregard when eating outside food.

Contrariwise, IP j’s and IP p’s results from the EAAM showed a tendency for separation (IP j) or integration (IP p) but they ate NIF for at least two meals per day which indicated assimilation. They both stated that food is not very important for them, they “*just eat*”.

Another exception is IP v. Her EAAM results indicate a tendency to integration, while her eating behaviour showed a mixture of marginalisation, assimilation and separation strategies. These results were confirmed by her within the interview:

"Apart from the food, I think I don't have any other problem." (IP v, line 66)

She skipped breakfast, prefers Indian food in food courts for lunch and eats predominantly fast food for dinner. Several times within the interview, she stated that she struggles a lot with the food supply in Singapore, while beside this problem she enjoys staying in the country.

7.2. Weight changes in context to acculturation

A context between weight changes and the results for marginalization within the EAAM could be identified.

Eleven participants explained they changed weight in Singapore due to negative alteration of their diet. Seven stated they gained weight, while four lost weight. One who gained weight did not fill out the EAAM and hence she is not considered in the following analysis.

Nine of these interview partners lived together with Indian flat mates in Singapore, one lived with his family. Furthermore, eight of them quoted in the EAAM a score of 2 or more in the subchapter marginalization. For comparison: the average score was 2. Hence, these interview partners were in or above average.

The four interview partners who lost weight did so because they did not eat proper food especially in the beginning when they arrived in Singapore. They all skipped breakfast in the beginning. IP h and IP v still do not eat anything in the morning. IP u even needed to go to hospital as a result of her insufficient diet. They are all looking forward to their regular home trip and narrated to gain a lot of weight while they stay with their mothers in India. Within the EAAM they ranked the items *"There are times when I think no one understands me"* with the highest score and stated in the interview that they had problems to adapt to their new life in Singapore. All of them stayed with their parents before the relocation.

Scores of participants who gained weight indicate they have problems to socialize and make friends; at the same time, they feel that *"there are times when I think no one understands me."*

7.3. Meat consumption and acculturation

Participants who increased their meat consumption in Singapore found it had an impact on their temple visits. In general, Hindus are not allowed to visit a temple after they ate non-vegetarian food. Consequently, to their increased meat consumption these participants reduced their temple visits. IP g explained that only if he has a very important reason to go to the temple “(...) *than only we will just say sorry god and we will go.*”

IP p explained that he shortened his fasting period. He is only allowed to eat vegetarian food during the fasting period and mentioned, that it is hard to find vegetarian food in Singapore, hence, he is forced to keep the fasting period shorter.

7.4. Continuity and alteration of traditional eating habits in context of cultural and psychological acculturation aspects

Looking at the single acculturation aspects, which were investigated in this research, a relationship could be identified to the migrants eating behaviour. Married women who stayed with their families were overall trying to keep their traditions, including the festival celebrations. These women stated to enjoy their live in Singapore. Maintaining their traditions included also that they predominantly cooked Indian food, while they were open to try food from other cuisines mostly for their children's sake.

Contrariwise women and men who stayed together with flat mates and were full-time working, did not find the time to keep their traditions to the full extent and were also forced to change their diet more towards NIF. Overall, these participants had mixed opinions about their live in Singapore and planned to move back to India one day.

Although relationships between cultural and psychological aspects and the migrants eating behaviour were identified, it need to be considered, that external influences like time and household composition might regulate this relationship.

7.5. Result Summary Research Question 3 (RQ3)

This chapter examined RQ3:

Is there an interrelation between dietary acculturation and other acculturation factors?

The approach to classify the migrants' dietary acculturation in daily meals to the four acculturation strategies identified by BERRY (1980) showed accordance

between the strategies for dietary acculturation and their acculturation strategies for nine participants. In ten cases, the used strategies for dietary acculturation deviated from the migrants' acculturation strategy. One interview partner did not fill out the EAAM and hence she was not considered in these results. Furthermore, four participants were identified as exceptional cases in this context.

An interrelation between weight changes and the scoring for marginalization could be identified. Eight out of eleven participants who experienced weight changes in Singapore due to negative modifications in their diet scored in the EAAM relatively high for the questions concerning marginalization.

Moreover, an interrelation between the migrants eating behaviour and their acculturation could be identified concerning their meat intake and temple visits. Migrants who increased their meat intake consequently reduced their temple visits, as they are not allowed to enter a Hindu temple after the consumption of non-vegetarian food.

An interrelation was identified between the participants' efforts to keep their traditions and their intake of Indian food. However, this interrelation was regulated by external factors, mainly time and household composition. Participants who worked only part-time or were housewives had more spare time to practice their traditions and to prepare Indian food. Full-time working participants lacked time to do this, consequently they ate more NIF and reduced or skipped practicing their traditions in form of celebrating festivals, visiting temples or praying.

8. IDENTIFIED GROUPS BASED ON DATA RESULTS

Findings expounded in result chapters IV5 to IV 7 indicate a broad spectrum of eating habits, affecting factors, personal values and attitudes towards nutrition within the investigated sample. Thus, generalisations and classification about the eating behaviour and related factors of Indian migrants would be ineligible and would restrict the comprehensive specifications of each interview partner. Continuity and alterations of the migrants eating behaviour are very specific and based on socio-demographic, psychological and environmental influences as well as on cultural and personal values and attitudes. However, data allowed a concentration of results to identify the general context of eating habits, affecting factors and the overall acculturation process of Indian migrants.

The data concentration was done based on the migrants' household composition and working hours.

As shown in Table 42 three groups were identified while three participants could not be explicitly ranked to one of these groups.

Table 42: Grouping of participants based on selected socio-demographic data (source: author's own)

n=24		household composition	
		living together with Indian flat mates	living together with family (husband, children or grandparents)
working hours	≥ 8	IP a, b, c, d, e, g, h, l, p, u, v	IP w, x group 3 IP j, IP n
	≤ 7	none group 1	IP k, l, m, o, q, r, s, t group 2 IP f

Similar age groups and periods of staying in the host country came along with this classification, as younger Indians between 20 and 31 and living in Singapore less than four years, were often single or did not stay together with their family and often worked full-time. In contrast, migrants between 35 and 47 and staying in the country more than seven years were married and stayed together with their families.

Table 43 provides an overview on the characteristics of the three groups.

Table 43: Group characteristics (source: author's own)

characterisitics	group 1 (The Unsettled) (n=11)	group 2 (n=8)	group 3 (n=2)
gender	3 women. 8 men	women	women
age	20-31	36-47	27 and 31
length of stay in SGP	≤ 4 years (n=10), 9 years (n=1)	length of stay ≥ 7 years (n=7), 3 years (n=1)	3 years (n=1), 7 years (n=1)
living with children	no	yes (n=7)	yes (n=1)
place breakfast	outside (n=3), home (n=5), skip (n=3)	home	home
place lunch	outside (canteen, food court)	home	office
place dinner	mostly home	home	home
food breakfast	NIF (n=6), skip (n=3), Indian (n=2)	mostly NIF	NIF (n=1), Indian (n=1)
food lunch	change between Indian and NIF	mostly Indian, sometimes NIF (Italian, Mexican, Western)	Indian
food dinner	Indian, rarely NIF (Italian)	mostly Indian, sometimes NIF (Italian, Mexican, Western)	Indian
eating out, frequency	daily	twice per week to once per month	rarely
eating out, cuisines	Chinese, Malay, Western, Thai for lunch, Indian or fast food for dinner	Indian, Italian, Mexican, Western or other NIF	Chinese, Western, Thai
meat intake, frequency	increased (n=5)	all vegetarians, no changes	no changes
fast food intake, frequency	≥ 1 per week (n=5)	1 per month to rarely	rarely
healthy modifications	yes (n=5)	yes (n=7)	yes (n=1)
food purchasing	supermarket, Mustafa	supermarket, Mustafa, online, wet market	supermarket, Mustafa, wet market
home remedies	rarely	yes, lesser extent	yes, lesser extent (n=1), yes (n=1)
festival food	lesser extent (n=4), full (n=3), no (n=4)	yes, lesser extent (n=4) or full (n=4)	yes, lesser extent (n=1), yes (n=1)
weight changes	yes (n=9)	yes (n=4)	no changes
significant influences	availability and variety of Indian food, time, convinience, food nostalgia, mothers, taste, caste/religion, trust	children, husbands, health, taste, caste/religion, traditions, trust	family, mothers, taste, trust
opinion SGP	like (n=3) pros and cons (n=7), dislike (n=1)	like (n=8)	pros and cons (n=1), like (n=1)
stay forever in SGP	no (n=11)	yes (n=2), not decided (n=2), no (n=4)	not decided (n=2)
maintaining traditions/religion	partly (n=11)	yes, lesser extent (n=4) or full (n=4)	yes (n=2)
results EAAM	integrated (n=9), separated (n=2)	integrated (n=8)	integrated (n=1), separated (n=1)
overall results	not settled, transition stage, missing home	settled	settled, but missing home

The three groups as well as the exceptional cases (IP j, IP n, IP f) will be described in the following.

Group 1 (n=11): The Unsettled - Coping with the new food and environment

"Actually till then I think there was no problem with the food or anything as such because anyways, my family was there. Everything was taken care by them. I think only in Sing - when I moved to Singapore, it was - I have to take responsibility of my own, right? So, that's the thing." (IP v, line 54)

The working and housing situation influenced the eating behaviour of this group, which includes three women and eight men. Except IP u, the Indian migrants found pros and cons about their life in Singapore, but none of them could imagine staying there forever. They came for economic reasons or to gain working experience overseas and they planned to move to another country or back home in the near future, or once their parents call them back or after they got married. Three men did not visit temples in Singapore, because they found them too “*touristic*” or they stated to be not very traditional. However, two of them stated they still have religious beliefs and overall participants in this group kept their religious rituals and temple visits. Religion was very important for most of them and seemed to constitute a “bridge” to their home. Although they all enjoyed celebrating festivals in India, four interview partners of this group stopped celebrating in Singapore mostly due to time reasons. Others celebrate overall to a lesser extent, again due to their lack of time and because most Indian festivals are not public holidays in Singapore. The results of the EAAM showed a tendency for separation for IP g and IP h. This is identic to their overall eating behaviour, as they tend to stick to Indian food. Furthermore, IP e and IP u showed overall a preference for Indian food, while their results of the EAAM tended towards integration. The remaining participants tended towards integration concerning their eating behaviour and from the EAAM results. They adapted eating habits from Singapore for some meals and kept their traditional eating habits for others. At the same time, they integrated in their social life in Singapore by speaking English and their home language, having friends from both countries and overall they feel accepted in their new environment, although they miss their home and family.

Only one woman lives in Singapore since nine years. All other participants of this group stay there four years or less. Most of these interview partners maintain an intensive relation to their home country and their families, especially to their mother. They travel home mostly twice per year. This might be caused by the relatively short time they stay in Singapore and by living without their

family or friends. In addition, they are between 20 and 31 years, which is relatively young, compared to group 2 (The Settled). For eight of them the relocation to Singapore was the first time they left India. Being responsible for themselves including organizing their food supply, still poses a challenge for them. Even though six of them stayed away from their parents already before they moved to Singapore, they were more confident with their life and food supply in India. In addition, their working time of eight hours and more per day does not allow them to spend too much time cooking or exploring food chains, which appeal to their taste. Owing to their limited time in the morning, for convenience and due to the limited availability of Indian breakfast, nine participants changed their breakfast eating habits. IP h, IP p and IP a, skip their breakfast completely. Six participants changed their daily breakfast items from a traditional proper Indian meal, which they mostly consumed in India, to fast solutions like bread and jam, cereals or sometimes just biscuits in Singapore. Only IP g and IP u maintained their Indian breakfast, but both do not prepare it on their own. IP g has Indian breakfast items in the company's canteen, IP u meanwhile lives with an Indian family who prepare breakfast and dinner for her. Before she stayed together with Indian flat mates as well and described her diet during this time as "*hopeless*". She also skipped breakfast during this time.

Again, due to the lack of time and for convenience reasons, the interview partners did not pack lunch. They all eat lunch at a food court or hawker centre during weekdays. IP g and IP d stick to Indian food for lunch, while the other interview partners eat also NIF to a certain extent. Chinese and Western food are the most mentioned NIF for lunch, followed by Malay food and sometimes Thai food. Overall Indians do not enjoy NIF in the hawker centres and food courts. Chinese and Malay food is not considered tasty and they consume it only due to the low variety of foods overall. Hence, they prefer Indian food whenever they can or at least Western food at this appeals more to their senses. However, they also criticized that the Indian food from the stalls does not taste like the authentic Indian food back home and lacks variety.

Notably the less variety and availability of vegetarian food and the big meat portions served within NIF dishes induced most of the meat eaters (n=6) to increase their overall meat intake (n=5). Furthermore, the low variety of vegetarian food among NIF dishes was often named as a reason to prefer Indian food.

As they miss their authentic Indian cuisine eight Indians cooked food for dinner in Singapore on their own or together with their flat mates. Even if they explained they cannot manage to prepare the food as good as their mother and often just "*mix and mash*" the ingredients together, they enjoy these meals. Often they are guided by their mother on the phone while cooking or ask the

mothers for recipes before. Only IP c liked to explore several non-Indian recipes. The remaining participants preferred to cook traditional Indian food as this is what they missed for lunch. IP a and IP v had dinner outside every evening. IP u had dinner cooked by her landlord lady. When participants from group 1 (The Unsettled) eat outside for dinner, they either have fast food or enjoy “*some nice Indian food*” in a restaurant on weekends. Ten Indian migrants of this group worked together in the same company where food is ordered for employees who work overtime. This dinner is mostly fast food. Hence, five participants consume fast food once per week or more. The remaining ones stated they consumed a lot of fast food during their initial time in Singapore, as it was easily available or because they liked the taste. After some time, they reduced their intake.

The participants showed pragmatic behaviour when grocery shopping. While they bought the general items like rice, milk or lentils at the local supermarket once per week or once in two weeks, they travelled to Mustafa from time to time to purchase Indian spices or other Indian items. Nine interview partners brought Indian food like spices, sweets or snacks from their home trips. In this group four participants did not talk about home remedies and further two do not use any remedies in Singapore. While five interview partners take home remedies to certain extents when they are sick in Singapore.

Four participants who celebrated festivals, preferred to eat the festival food in an Indian restaurant or to cooked some selected festival items at home. IP u, IP e and IP v enjoyed extensive festival meals with their friends. Overall, this group were not concerned about a healthy diet too much. Five participants reported modifications towards a healthier diet, which were mainly reducing their rice and oil intake or increasing their consumption of salads, fruits and vegetables. Nine participants reported about weight changes in Singapore. The four who reduced weight, remarked as a reasons for this their overall wellbeing after moving to Singapore. Being away from their family and home was what IP b called “*a dramatic situation*” and challenges to cope with the food in Singapore, induced them to eat less food and maintain an unbalanced diet. Three of them who gained weight consume fast food once per week or more, which might be a reason for their weight changes.

Overall, these participants showed a higher incidence of food nostalgia. On several points within the interviews they underlined they miss the food cooked by their mothers and admitted that they are not able to prepare these kind of foods on their own. Hence, food was in focus during their home trips and often resulted in weight gain even after short trips.

This group can be described as “on the move”. Even though they described feeling integrated in Singapore, they all planned to move back home or

elsewhere. Their eating behaviour seemed to be in a transition phase between the NIF and non-authentic Indian food they have to eat for lunch and mostly for breakfast and the dinner, they try to cook as authentic as possible or the fast food they get for dinner at work. Although they could obtain all Indian ingredients in Singapore, they longed for their mother's food back home.

Remarks: The women of IP g and IP p moved back to Singapore some months after the interviews were conducted. In addition, IP a and IP b got married and moved together with their wives. All four participants reverted to eating predominantly traditional Indian food and packed food for lunch. IP u got married as well and moved together with her husband to the US. There she started to cook Indian food for the two of them. IP j moved back to India and stays there with his parents, wife and children.

Group 2 (n=8): The Settled - Operating between modernity and traditions

"Basically, I try to keep the traditional part, so that I can ah give it to my children, so they see what our culture and they see that ah like I follow certain festivals and ... and I do those. So they, they are still in touch with our tradition. But ah it's both actually. Yeah. So that's why I'm telling I'm like half modern and half ... [IP laughing] ... so you ... I don't really do so much of ah visiting temple on a regular...I, I do it but it's not that regular." (IP o, line 138)

The eight women included in this group followed their husbands to Singapore. They work part-time or are housewives, living together with their family. Except IP s, they all have two children. Although moving away from their families in India was a hard step for them, the predominant number of women got used on their new life in Singapore quickly and enjoyed the independence they have there. IP l and IP s lived overseas before and moving to Singapore was not an issue for them. They all enjoyed living in Singapore and two of them could even imagine staying there forever, two participants could also imagine this but have not decided yet about their future plans.

Most of them gave birth in Singapore and built their social life there with other, mostly Indian, mothers. Their children go to school in Singapore and the women explained the children grow up with "*both cultures*". After living in Singapore for more than seven years (except IP q), all of these women were settled in the country. Even those who could not imagine staying there forever termed Singapore as their "*home away from home*". They travel to India once per year or once in two years. Their family life influenced their eating habits and their traditional attitudes. In addition, their working situation allowed them to prepare food that covers everybody's in the family needs and to follow Indian traditions.

They all celebrated Indian festivals in Singapore to a certain extent, with the intention to pass the traditions on to their children. Some stated they visit temples on a regular basis and pray daily, while others reduced their religious rituals. However, they all make it a point to pass the Indian traditions and Hindu rituals on to their children. The results of the EAAM showed a tendency for integration for all of them except IP I, who did not fill out the questionnaire. They speak English at home as well as their mother tongue and have Singaporean as well as Indian friends. However, this was not congruent to their overall eating behaviour. Overall, they stated that their eating behaviour has not changed much since they live in Singapore, except that the *“so called Western food has crept into our diet.”* They all changed their traditional Indian breakfast towards NIF (except IP s and IP I who changed it already in other countries), including cereals and bread with jam. While for lunch and dinner, they still prefer to prepare Indian food and eat both meals at home most days. Owing to the demand of their children, they also prepare NIF to certain extent, from very rarely (IP m) to three times per week (IP q). In this context, they mostly mentioned Italian food like pizza and pasta. Some women also prepare Mexican food like quesadillas or Western food like sandwiches, homemade burgers or salads. Overall, they enjoy preparing and eating these foods. Most of these women (n=7) made healthy modifications within their diet. Five reduced their rice intake for health reasons; in addition, some started to eat more salads, fruits and vegetables in Singapore. Also changing to olive oil was a common modification. They worry about their children's health and want to cook for them as healthy as possible. Therefore, they do a lot of *“research”* from books and on the internet about healthy nutrition and they exchange their experience with other mothers. In addition, their own mothers advise them on cooking healthy for their children. They mostly worried about their children's protein intake. To secure a decent protein supply they practiced different behaviours. One woman gave her children protein drinks, one included quinoa in the dishes and two allowed their children to eat meat; others prepare eggs for the children. Some explained that their children do not like to eat lentils on a daily basis; hence, they have to prepare protein rich alternatives. Women reported they include non-Indian ingredients in their dishes like Chinese spinach or broccoli and some also started to eat eggs or at least prepare eggs for their children. All women of this group were vegetarians and did not change anything in this regard. However, two stated that they allowed their children to eat meat as a protein supply. Two others narrated that their husbands started to eat meat. Overall, these participants revealed that their children already eat much more NIF than themselves. However, most women put an emphasis on bringing up their children as vegetarians. Five women explained to belong to the Brahmin caste,

but most of them admitted that they abstain from eating meat due to ideological reasons. Six of these women have a helper at home who is responsible for the food supply to a certain extent, from just helping the interview partners in the kitchen, to preparing all meals single-handed. The participants' parents or parents-in-law visit them once per year for four weeks or more and then overtake the responsibility for the kitchen and prepare traditional Indian food.

The women stated they miss some special ingredients, like poppy seeds or Indian vegetables, yet overall they can find all Indian foods in Singapore. Three of them order their groceries online, except the fresh ingredients like fruit and vegetables. Others buy general foods from local supermarkets and fresh food from the wet market. For single spices and typical Indian ingredients, they visit Mustafa from time to time. Still most of them prepare their own spice mixes or get them handmade from their mothers. Although, they rarely talked about food nostalgia or feeling homesick, most of them maintained an intense connection to their mothers, including input on cooking and healthy nutrition.

When participants from this group eat outside, it is mostly on the weekends as a family event. They visit Indian or non-Indian restaurants or often they leave the restaurant choice to their children. For their children's sake, they visit fast food restaurants rarely or maximum once to twice per month. Most of them are afraid that the food in fast food chains is not purely vegetarian; hence, they abstain from eating there but just accompany their children. However, more than half of these women reported they ate a lot of fast food during their initial time in Singapore as the big portions and the new and uncommon taste impressed them. After some time, they stopped this as they realized that the food is not healthy. Therefore, they allow their children to go there only rarely.

They all use home remedies to certain extent. Most reported their children do not like the taste of home remedies, so they use them beside allopathic medicine or try to use home remedies first. If this does not help recovery, they switch to allopathic medicine.

Two women gained weight since they live in Singapore, while one lost a "*bit of weight*".

This group was settled in Singapore and, in comparison to group 1 (The Unsettled) (The Unsettled), they also seemed to be "settled" in their eating behaviour. Although they all eat NIF most of the time for breakfast and preferred to cook traditional Indian food for lunch and dinner, cooking NIF from time to time was a fixed ritual for them similar to being "on the move". They maintain a close connection with their mothers back in India, but rarely talked about food nostalgia or missing Indian food.

Remarks: IP s, IP q and IP t left Singapore some months after the interviews. IP s lives in Delhi, IP t moved with her family to Bangkok and IP q firstly relocated to the Philippines and lives meanwhile with her family in Japan.

Exception: Although IP f fits into this group based on her socio-demographic characteristics “working hours” and “household composition”, her eating behaviour differed from the other women. She lived together with her husband, and so far without children (she was pregnant at the time of the interview). As she needed to go to university for her PhD, sometimes she had lunch there or she brought packed lunch from home. She was a Brahmin and hence a vegetarian. Hygiene was a major concern for her and mistrust in the Chinese vegetarian food. Therefore, she preferred home cooked food or Western food from outside, which she felt more confident about. However, she was not very familiar with preparing Indian food and stated she would “*just cook just to eat something*”. IP f maintained her religious rituals by visiting the temple on a regular basis, while she celebrated festivals to a lesser extent. Instead of cooking festival food, she visited a restaurant. She tended to be assimilated based on the EAAM results, however her eating behaviour was more towards separation. Nevertheless, compared to the women of group 2, she did not put too much emphasis in cooking traditional food and overall in keeping her traditions.

Group 3 (n=2): The Traditionalists - maintaining their Indian culture

"Ahh, I should say my food intake has not changed, because even now my grandmother cooks for me. I take lunch from home. So it doesn't change. But ah what I can say is like, ah because I'm in Singapore, sometimes if I don't take food, I like to eat out." (IP x, line 259)

These women stayed together with their families, IP w with her husband and daughter and IP y with her grandparents. They both enjoy their time in Singapore but have not decided about their future plans. However, both mentioned they would prefer to move back to India. While IP w followed her husband to Singapore, IP x came to do her master degree while working. Both women work full-time. They maintain their Indian traditions and religions by celebrating festivals, preparing festival food and visiting the temple and the church (IP w is Christian) on a regular basis. IP w appeared integrated based on her EAAM results, while IP x tended to be separated. Concerning their daily meals they both preferred Indian food and seem separated in their eating habits. IP x has NIF for breakfast as their grandparents are too old to prepare a traditional Indian meal in the morning and she does not have the time to do it.

However, she packs lunch and eats Indian dinner most of the time at home. IP w has a helper at home who prepares the meals for her, which are mostly traditional Indian. She also packed Indian food for lunch. Both rarely eat fast food; IP x does sometimes when she stays until late in the office and IP w for her daughter's sake. When they eat out they visit food courts; IP w mostly consumes Chinese food there, IP x also tried other NIF. However, both mentioned Indian food as their preferred cuisine. They both eat meat to a certain extent but they did not increase their meat intake in Singapore. Although IP w lives with her grandparents, both interview partners miss their mothers and their families back in India. IP x mentioned healthy modifications in her diet while IP w explained health is important for her but overall she does not put too much emphasis too it.

Overall, these women maintain their traditional life and eating habits. They enjoy living in Singapore, although IP x is more separated and preferred to mingle with Indians, while IP w feels comfortable with both Indians and Singaporeans. However, when it comes to food, they both prefer a traditional Indian diet. IP w mentioned that her daughter eats much more of *“all those ah Western food”*.

Exception: IP j and IP n belonged to this group based on their socio-demographic characteristics “working hours” and “household composition”. Referring to their overall eating behaviour, they tend more towards group 1 (The Unsettled).

V DISCUSSION

This study investigated the eating behaviour of 24 first generation Indian migrants in Singapore. Affecting factors on the eating behaviour were analysed. Furthermore, dietary modifications were examined in context to the overall acculturation process of this research sample.

The methodological approach, including sampling and data collection, will be discussed. Thereafter, findings will be examined, based on each of the three major research questions and will be compared to the results of previous studies. As one motivation for this research was given by the fact that Indian migrants showed a higher prevalence for diet-related disease in previous studies, results will be also discussed considering this aspect.

1. DISCUSSION OF METHODS

1.1. The study sample

Participants in this study have been recruited by using the criterion strategy combined with snowball sampling. Indian citizens who participated the study should fulfil the following inclusion criteria: be between 20 to 40 years, come from South India, believe in Hinduism and live in Singapore for more than one year. The total sample of 24 participants aspired to be classified into six single female and six single male participants living together with flat mates and respectively six married women and married men living together with their families in Singapore. A similar sample size (between 18 and 34 participants) had been used in former qualitative studies on the dietary acculturation of a migrant population (HIMMELGREEN ET AL. 2007, MAHADEVAN 2003, MEHROTRA 2004) and was found to be suitable in order to receive adequate information to answer the research question.

The aspired number of participants was interviewed. Nevertheless, socio-demographic requirements were not fulfilled as designed.

More female participants (n=14) joined the study. The group of women included eleven married participants. Although there lives a number of single working women in Singapore, it was easier to connect with married women, which might be caused by time reasons, but also due to the fact that single women are not too willing to meet with others than their female flat mates or colleagues. Hence, the aspired number of six single women living together with flat mates was not achieved. Another group, which was only represented by one woman, are the full-time working mothers who live together with their family. These women

seem to be very low represented and many men explained within the interviews, it is still the Indian tradition that women stop working after they got married, even if they are highly educated. In addition, single women explained their future plans depend on the decision of their husbands about whether they will work after marriage.

While six single men could be recruited, there were only four married men. Overall, it was difficult to obtain married men, as they were not too interested in talking about their eating behaviour. Traditionally in an Indian marriage, the women are mainly responsible for the household. This might be one reason why married men were not eager to join an interview. The interviews with the two men who lived together with their women were not very information-rich and compared to other interviews they were short in time. The other two married men lived together with flat mates because their wives stayed in India to give birth. These interview partners showed similar eating behaviour to single men.

The socio-demographic data led to classifying a group of single men and women living together with flat mates and another group with married women living together with their families. A third group included women working full-time who lived together with their families. For married men it was not possible to identify characteristics of their eating behaviour due to the low sample of this group and differences in their eating behaviour.

Inclusion criteria were described in the information letter, which all participants received after the first contact. However, within the interview it emerged, that two participants were Christians and one woman was born and grew up in Mumbai, although her grandparents were Tamilians. These aspects did not result in different findings compared to the Hindu participants or those who had their roots in South India. Hence, data from these interview partners were included in the data analysis.

The strategy of snowball sampling provided participants from two major sources: Colleagues of the researcher's husband, who worked for an international company and friends of the researchers' yoga teacher, who worked for an international Yoga school in Singapore. This led to a highly educated sample with 23 participants holding a bachelor, master or diploma degree. The sample can be classified again into two groups. Participants who stayed together with their flat mates and lived in Singapore less than 6 years, stayed in public houses, HDB¹³ flats and occasionally talked about their plans to save money for themselves or their family and to live in Singapore more

¹³ HDB = Housing and Development Board (which is managing public housing in Singapore)

economically. Most of them were Engineers. The other group of married women stayed with their family and worked part-time or were housewives, overall lived in condominiums, had a maid and sent their children to international schools.

1.2. Methods to investigate eating behaviour and affecting factors

This study used a qualitative approach, including further instruments in order to achieve detailed data to answer the research questions. The instruments will be discussed in the following.

Semi-structured interview

The semi-structured interview was chosen, because it assured that some major topics were discussed within each interview. At the same time, it allowed the researcher to guide the interview in the desired direction. It provided the flexibility to ask individual probing questions in order to identify relations between changes in the participants' daily life and specific decisions made with regard to their eating behaviour.

The conversational style of the semi-structured interviews gave participants the opportunity to talk freely about issues which were important for them or which the interviewer had not thought of in advance. As an example, IP u talked in detail about her initial phase in Singapore, which she experienced as a dramatic time. IP g explained the role of castes in daily life in his village back in India. Both examples provided important insights into the migrants' life as well as the Indian culture in relation to traditional eating habits. Indian women in particular talked about personal and family related issues, which helped to understand the holistic situation of these women including their dietary modifications.

HESSE-BIBER AND LEAVY (2010:105) described:

“In-depth interviews are a meaning making partnership between interviewers and their respondents.”

Therefore, the authors explained, it is best to decrease the level of “*status hierarchy*” between the researchers and the participants. In most interviews, this criterion was met. Both, the researcher and the participants were in a sense “migrants” in Singapore and confronted with the same new food supply and cultural as well as social circumstances. This issue provided a shared experience to talk about the migrants' experiences with the Singaporean culture, traditions, society and especially the food. However, in some cases, achieving the same hierarchy was not given, most probably for cultural reasons. This was especially the case in interviews with some Indian men, who seemed

uncomfortable being interviewed by a woman, who belongs, in addition, to a different culture.

Overall using the semi-structured interview was an adequate method to achieve detailed information on the migrants' eating behaviour and overall acculturation in Singapore.

24-hour dietary recall

The 24-hour dietary recall was conducted in order to receive additional information on the migrants' dietary intake. It is a common assessment method to obtain the dietary intake of a migrant population and had been used as well in previous studies (JONNALAGADDA AND DWAN 2002; BATIS ET AL. 2011; KIM ET AL. 2007; GUENDELMAN AND ABRAMS 1995). The questionnaire was filled out during the interview and was discussed afterwards with the participants.

This method was preferred before the food frequency questionnaire, which would have relied on a pre-generated list of foods (CADE ET AL. 2002). As the present study is the first research on eating behaviour of first generation Indian migrants in Singapore, no data was available which could have been used as valid basis to generate a food frequency questionnaire.

In general, one interaction with the participants is necessary to fill out the 24-hour dietary recall. The effort for the participants to complete the questionnaire and the required time is marginal. In contrast to these advantages stands the risk that the chosen "eating day" is atypical for the participants overall dietary intake due to day-to-day variation (BLOCK 1982). This might be one reason that results of the 24-hour dietary recall did not match with the statements from the interviews in some points. Based on the data from the 24-hour dietary recall, participants consumed in all meals more Indian food and ate less outside compared to the information they gave during the interviews. Interviews that took place in the researcher's or the participants' home were often conducted on weekends. Hence, the food items presented in the questionnaire were sometimes consumed on a Saturday and participants added that this was not a typical eating day. Furthermore, the 24-hour dietary recall included boxes, wherein the interview partners were required to tick if they classify their food as "Indian", "Other Asian food" or "Western food". Items like biscuits or oats were often classified as Indian food in the questionnaire and as NIF during the interview. These different classifications led to partly dissonant results for the 24-hour dietary recall and the interviews.

Since this study included one 24-hour recall, the data gained are less reliable as representative of a typical eating day for participants. However, detailed data on the migrants eating behaviour were gained within the interviews. The intention of using the 24-hour dietary recall was to underline these results. Studies that apply food-based measures as the only instruments to gather information on a population's dietary intake are recommended to use multi dietary recalls or food records involving multiple days, in order to receive more meaningful information on the participants' usual diet.

Socio-demographic data

Previous studies identified an interrelation between socio-demographic data and dietary modifications among migrants in the host country (HOLMBOE-OTTESEN AND WANDEL 2012; MAHADEVAN 2003; RENZHO AND BURNS 2006; SATIA ET AL. 2001). These findings suggest thorough consideration of potential influences due to socio-demographic characteristics on the diet of a migrant population before conducting a survey. Depending on the culture and values of the investigated migrant population, diverse socio-demographic data might affect dietary modifications.

Socio-demographic data in the present study were selected based on the model of SATIA-ABOUTA (2003), (please refer to chapter II 2.1. in this work). However, for diverse reasons only some of the socio-demographic factors suggested by SATIA-ABOUTA (2003) were considered in this study. Interview data showed that all participants in this study migrated voluntarily to Singapore. Therefore, the aspect "voluntary versus non-voluntary migration" had been left out. Furthermore, all participants spoke English fluidly during the interviews hence the aspect "language" was not incorporated in the results. However, this aspect was also included within the EAAM. "Area of residence in host country" was irrelevant, as Singapore pursues the Ethnic Integration Policy of the Housing and Development Board, (HOUSING AND DEVELOPMENT BOARD 2013b; please read to chapter II 6.1 for more information) to avoid the forming of ethnic enclaves. "Education" was not considered as all participants were found to be highly educated. The aspect "Age at migration" was left out as a predominant group of interview partners arrived in Singapore aged between 20 and 25.

The participants' "income" was not requested in this survey for ethical reasons. Despite the high education of most participants, findings indicate different economic status between single migrants living together with flat mates and married women staying with their family. An economic influence based on an

assumed lower income of group 1 (The Unsettled) and group 3 (The Traditionalists) and a better economic status of group might be a contributing factor for the migrants' eating behaviour. Participants of group 1 (The Unsettled) predominantly ate out in food courts, fast food restaurants or local restaurants in Little India, which are found to be quite affordable. They buy food from the more favourable local supermarkets or brought along some foods from India to save money. Contrariwise, participants from group 2 (The Settled) ate out more in non-Indian restaurants, which are more costly, likewise some reported they buy organic food and other expensive food which they purchase in Cold Storage. This is the more expensive local supermarket in Singapore. These results indicate that it might have been of interest to know the migrants' income in order to consider this more closely when analysing the eating behaviour.

Another aspect about socio-demographic data is the point of time when these data are best requested within the interview. Some authors recommended to gather socio-demographic information at the end of the interview to avoid a negative influence by the question-answer structure to the flexibility of the interview and because these questions are supposed to be "*boring*" for the participants (FLICK 2009; PATTON 1990). However, the pre-test in this study showed that some socio-demographic information were important building blocks for the interview. In addition, participants in the pre-tests were confused about these "*important*" questions at the end of the interview. Consequently, for further interviews, the questionnaire was asked in the beginning as recommended by WITZEL AND REITER (2012).

1.3. Methods to investigate acculturation

Diverse factors influence the acculturation process and make it therefore difficult to quantify within a qualitative approach. Numerous unidimensional as well as bidimensional measures had been generated in previous studies (KANG 2006; BERRY 2006). Both types of measures had been criticised for diverse reasons (CUELLAR, ARNOLD AND MALDONADO 1995; CABASSA 2003; RYDER, ALDEN AND PAULHUS 2000), because often the scales do not include cultural aspects. Therefore, this study included a bidimensional acculturation measure and in addition the investigation of cultural and psychological acculturation aspects. Both approaches will be discussed in the following.

The East Asian Acculturation Measure

The East Asian Acculturation Measure developed by BARRY (2001) is based on the bidimensional acculturation model of BERRY (1997). It investigates if the

participants tend to use an integration, assimilation, separation or marginalization strategy within their acculturation process. The questionnaire was handed out and explained to the participants by the end of the interview. This questionnaire was chosen out of numerous acculturation measures as it was found to be easy to understand in its wording and included the social as well as the language dimension of acculturation. Furthermore, it was developed and validated for East Asian migrants. The acculturation process of East Asian migrants might assumedly be different to the acculturation process of South Asian migrants. However, the questionnaire was assumed to be more suitable for South Asians than questionnaires developed for a migrant population originating from another subcontinent like the “Short Acculturation Scale for Hispanics”. Another reason for using this questionnaire was its bidimensional approach.

While both interview partners (one was unmarried, one was married) in the pre-tests were comfortable completing the questionnaire, in the following interviews especially unmarried participants did not appreciate filling out the EAAM. Some specific questions concerning social issues seemed to elicit discomfort in the interview partners. Unmarried women and some unmarried men felt uncomfortable about the question “Indians should not date non-Indians”. One reason for this might be the Indian concept of arranged marriages, which include the tradition not to date at all with persons from the other gender before getting married. Therefore, this question confused unmarried interview partners. Furthermore, some interview partners realised immediately that the interviewer was also non-Indian and they seemed to feel forced to disagree with this question.

Despite these concerns, data from the EAAM provided information of great value for the overall findings and were therefore analysed and included in the results chapter. The most criticized question, which was “Indians should not date non-Indians”, was included in the results chapter as well, because answers did not influence the overall findings significantly.

Cultural and psychological aspects as acculturation indices

Acculturation scales neglect determining modifications in the migrants’ cultural identity (CABASSA 2003). Considering eating behaviour as part of humans cultural identity (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; PEÑALOZA 1994) it is likely be affected by cultural modifications within the acculturation process.

Based on these facts, this study selected cultural aspect to examine in context of the migrants' acculturation process. Migrants' practices of their religious traditions and rituals in Singapore with a focus on temple visits, pujas and festivals were investigated.

While the aspect of festival celebrations was easy to assess (frequency and extent of celebrating), assessing the significance of religion for the interview partners brought some difficulties. Participants explained Hinduism as "*a lifestyle*" without fixed regulations in the form of regular temple visits or pujas. This experience is confirmed by RANGASWAMY (2000:124), who explained, that the "*variety of religious practices*" makes it difficult to assess the significance of religion for Indian migrants. Hence, information about temple visits and the practice of praying were only meaningful when participants set them in relation to their religious habits and traditions in India.

Findings on psychological acculturation aspects, including the migrants' experiences of their initial phase in Singapore, and their overall attitudes towards their host country, provided meaningful information that could be interrelated to their eating behaviour.

Summing up, combining an acculturation measure with specific acculturation aspects provided a comprehensive insight into the migrants' acculturation process. Although religious acculturation aspects were partly difficult to assess, overall the single acculturation aspects afforded comprehensive information in order to gain a holistic view on the migrants' acculturation process.

Accordingly, studies on acculturation should include diverse influencing variables on acculturation. IP u provided a good example for the necessity of using different methods to measure acculturation. She tended to be integrated based on the EAAM results. Nevertheless, she did not enjoy living in Singapore and used mostly negative terms when talking about the country. She also maintained her traditions and showed overall more behaviour towards separation. Other migrants showed discrepancies in their EAAM results and their cultural changes and psychological well-being as well. These discrepancies can be explained by the fact that the EAAM examines social behaviour and language and neglects cultural and psychological aspects.

BERRY AND SAM (1997:300) explained, that studies ignoring one of the influencing variables on acculturation are incomplete. However, they admit that there is no study, which has included all factors. This study included selected factors affecting acculturation and therefore it does not claim to be exhaustive.

1.4. Methods for data analysis

An interview guide was used in this study. This might suggest using the analysing method of thematic coding based on the topics of the interview guide. However, it was decided to derive categories inductively from the interview data by using open, axial and selective coding as recommended by STRAUSS AND CORBIN (1990). This method allowed identifying issues, which were not included in the interview guide. Aside from the categories that refer to the three research questions, a category for “Indian food” and “Indian culture” were identified. These two additional categories provided essential information for further data analysis. Hence, the method of open, axial and selective coding provided a suitable approach for data analysis in the present study.

For further data analysis, some previous studies on dietary acculturation used a score to determinate the level of dietary acculturation (FRANZEN 2009; PENG 2005). This study intentionally avoided creating a score system. Each interview partner brought along their individual eating behaviour, which was influenced by diverse factors. Concentrating the results in a score, would have ignored significant data from the individual cases. Instead of using a score, significant findings were classified by using the method of scalable structuring of MAYRING (2008:92-99). The findings of the scalable structuring were underlined with individual statements of the participants. This provided a comprehensive description of the findings without missing the individuals' data.

An approach was undertaken to arrange the eating behaviour of the migrants within BERRY's (2005) acculturation model. Although some meaningful information could be identified by using this approach, it neglects the migrants' satisfaction about their eating situation. Participants of group 1 (The Unsettled) were found to be integrated according to their overall eating behaviour, but eight out of eleven interview partners in this group were found to be discontent with the food and their diet in Singapore. Most participants with weight changes (nine out of eleven) were found in this group. While group 2 (The Settled) tended to be separated based on their eating behaviour, but were content with their diet in Singapore. Furthermore, the acculturation strategy does not provide any information on the quality of dietary modifications (positive or negative). This aspect should be considered for further research.

2. DISCUSSION OF THE RESULTS

In this chapter, results will be discussed based on the research questions. Furthermore, the results will be compared to previous studies concerning dietary acculturation, affecting factors and identified interrelations to other acculturation aspects. This comparison will focus on studies about Indian migrants, but also include findings about dietary acculturation in other Asian migrant populations. As a final point, the findings will be discussed in context to the prevalence of Indian migrants for diet-related disease.

2.1. Continuity and alteration of traditional eating habits

Dietary acculturation in daily meals

Breakfast: Seventeen interview partners modified their breakfast eating habits in Singapore towards a “Western style” breakfast based on cereals or bread with spreads. Three participants skip breakfast in Singapore. Modifications within the breakfast could not be related to socio-demographic factors. Participants of all groups practised the breakfast modifications and mostly attributed this to convenience, time, a new household composition in Singapore or health. These findings were similar to the results of the studies from GUPTA (1975) and MAHADEVAN (2003). Both studies were conducted with first generation Indian migrants in the US. Participants in MAHADEVAN’s (2003) study replaced traditional Indian breakfast food items like idli or dosa to cereals. Furthermore, in her research, breakfast was the meal that was skipped most often. These changes in the breakfast eating habits were caused due to limited time and found to be unrelated to socio-demographic data, similar to the present study. Studies on other Asian migrant populations conducted in US with Korean migrants (LEE, SOBAL AND FRONGILLO 1999), Vietnamese migrants (CRANE AND GREEN 1980) and Chinese migrants (SATIA ET AL. 2000; LI 2010; GRIVETTI AND PAQUETTE 1978) confirmed that migrants are likely to change their traditional breakfast towards Western breakfast food items. While previous studies found convenience and time as major influences to breakfast modifications, participants in the present study additionally named health as one reason. They classified the Western style breakfast to be “*lighter*”, compared to the traditional Indian breakfast. Participants explained that due to the lower physical activity they practice in Singapore, a lighter Western breakfast might be healthier. The high level of health communication in Singapore might have lead participants to this opinion.

Lunch and dinner: Participants in the present study could mainly be divided in three groups concerning the place where they consumed their daily meals.

Group 1 (The Unsettled) included migrants who worked full-time and lived together with Indian flat mates. They ate lunch outside the home due to compulsion at least on weekdays, but did so also mostly on weekends. Interview partners of this group preferred to cook traditional Indian food for dinner at home, which mostly happened together with their flat mates. Group 2 (The Settled) included married women who lived together with their families and worked part-time or were housewives. They mainly cooked all meals at home and ate out occasionally, mostly on weekends as a family event. Group 3 (The Traditionalists) brought packed lunch from home to their work and cooked dinner at home. These results agree with the findings of MAHADEVAN (2003). In her study, housewives cooked traditional Indian food for most meals at home. Full-time working participants in her study mostly ate out for lunch in restaurants as well as in fast food places. They had dinner at home, but did not frequently cook traditional Indian food as the participants in the present study did. One reason for this might be that Indian groceries were easier available in Singapore compared to State College, the city in which MAHADEVAN's (2003) study was conducted. The preference of Indian migrants for traditional Indian dinners is confirmed by VARGHESE AND MOORE-ORR (2002) and GUPTA (1975). The overall identified preference for traditional Indian dinner among Indian migrants is likely to be caused by their working situation. If working interview partners live without their family, they do not have time to prepare and pack lunch in the morning. Consequently, they often relied on eating lunch outside. However, the availability and variety of Indian outside food is limited, which lead migrants to eat NIF for lunch sometimes. Participants also reported on the non-authentic taste of Indian food outside the home in Singapore. Considering the changes in the breakfast towards Western food and the discontent about the outside food for lunch, preparing and consuming a traditional Indian dinner provided migrants with a home-like feeling and well-being. Furthermore considering Singapore as the most expensive city worldwide and India holding the cheapest cities worldwide (THE ECONOMIST INTELLIGENCE UNIT 2014), eating out can assumed to be expensive for Indian migrants, which is confirmed from some statements within the interviews. Although, migrants receive a Singaporean salary, most of them sent money to India in order to support their families, so they were also saving money. Buying vegetables, rice and spices to prepare dinner at home might therefore be cheaper, compared to eating out every evening. Considering these aspects, it becomes clearer, why Indian men also started to cook in Singapore. This was a surprising finding as in general women are responsible for cooking in Indian families.

Although food is of significant value in both cultures, the Singaporean and the Indian, there are meaningful differences in the kind of the meals consumed as well as in the place where the food is consumed. Singaporeans prefer to eat fancy food, which can be newly created versions of traditional foods or dishes based on new recipes. They prefer to eat outside the home, which is confirmed in the results of the Singapore Nutrition Survey 2010. The survey showed that in 2010 in total 60% (compared to 47.8% in 2004) of participants reported they eat out for lunch or dinner at least four times per week in hawker centres, coffee shop stalls, food courts, restaurants and/or coffee houses (HEALTH PROMOTION BOARD 2010). The increased eating out rate can be attributed to the easy availability of a huge variety of “*cheap and delicious*” foods in hawker centres, restaurant and coffee shops. Moreover, the higher employment rate of women and the physical separation of the work place and the home, make it necessary to eat out more often (CHENG 1982). While the National Nutrition Survey of Singapore in 2010 showed that the role of foods courts and hawker centres significantly increased during the last 6 years as a source for outside food (HEALTH PROMOTION BOARD 2010), most participants in this study, did not like the foods from these places and preferred homemade food whenever they had a chance. Also the Singapore Nutrition Survey showed that Singapore Indians were below the Singaporean average concerning their rate of eating outside home. 88.5% (compared to 65.5% of total participants) of Singapore Indians preferred to bring packed dinner from home or eat dinner at home. 53.7% of Singapore Indians preferred to bring lunch from home or consume the meal at home. On the contrary only 29.3% of all participants preferred homemade food for lunch. This is concurrent with the results of studies in India. Although GAIHA ET AL. (2012) found that eating out is getting more popular especially in Indian cities during recent years, the quantity of meals taken outside home is with an average of less than 4 times in 30 days (ARNOLD ET AL. 2009) still low compared to Singapore. Indians prefer to eat traditional Indian food (KITTLER, SUCHER AND NAHIKIAN-NELMS 2012). One reason for that might be that it is still common for Indian women to stay at home after getting married, while more than half of the Singaporean women are working (Table 6). Furthermore, traditionally Indian women are responsible for household duties even if they are working (please refer to chapter II 5.4). Married women in the present study confirmed that their husbands prefer packed food from home a few days per week. These foods might be traditional Indian, but some

women also explained their husbands like to take some lighter food from time to time like sandwiches or salad. Men, with a length of stay in the country less than four years, reported that when they stay together with their wives, they would pack traditional Indian food for lunch. Eating out on weekends or for special events was also not common in India as reported by participants. However, they all started to eat out in Singapore to different extents, which could be once per month up to once per week. This habit was new for most participants and they explained they eat out more since living in Singapore. Although most participants underlined that they prefer homemade food, their increased quantity of outside meals indicates a significant change in their eating habits.

In both countries different set pattern are practiced within the meals. While the typical Indian meal consists of a special order where food items are served separately, Singaporean meals, in particular the ones served in hawker centres and food courts, consist generally of rice and a freely selectable range of meat and vegetable dishes (e.g. one could choose rice with two meat and two vegetable dishes, served on one plate). When participants talked about Indian meals, they named traditional components. For most participants rice and spices were the most important ingredients for an Indian meal. However, none of them insisted on eating the full range of a traditional Indian meal daily. The set pattern of the Indian meals seemed to become loose in Singapore. This result might be explained by the fact that participants of group 1 (The Unsettled) did not bring along good cooking skills and were pleased they could prepare a basic Indian dinner. Participants from group 2 (The Settled) did not need to prepare meals for the whole joint family which they might have needed to do in India, so they experienced more freedom in their cooking, which might have unburdened them from cooking an extensive meal.

NIF: Most participants mentioned that including NIF in their diet as one of the major changes in their eating behaviour after moving to Singapore. Not surprisingly, this was confirmed by previous studies about the eating behaviour of Indian migrants (VARGHESE AND MOORE-ORR 2002; MAHADEVAN 2003; GUPTA 1975; RAJ, GANGANNA AND BOWERING 1999). While most studies focused on single non-Indian groceries, this study put more emphasis on cuisines. The reason for this was based on the information received from the interview data. Except for breakfast, where participants independent of socio-demographic characteristics changed to Western foods, for lunch and dinner, two groups of participants could be identified based on the kind of NIF they consumed. Interview partners who were forced to eat out for lunch due to their working situation, ate occasionally Chinese, Malay, Thai or Western food for lunch. Most

participants did not like the foods and preferred to eat Indian meals whenever they could. Married women who cooked all meals of the day at home also started to prepare Italian, Mexican and sometimes Western dishes. IP q explained cooking NIF was not possible in India, where she stayed together with her parents-in-law, who were not open to trying NIF. Other women confirmed, when their parents or parents-in-law are in Singapore, they stick to Indian food. This confirms the findings of MEHROTRA (2004). In her study on Indian migrants in the US, women stated that cooking light meals or NIF would not have been possible in India where they lived with the joint family. When they eat out in Singapore, most of these women were open to NIF. They enjoyed eating food from these cuisines, but explained that they did not like Chinese and Malay food for several reasons. Although some explained they ate Chinese food in India as well, it tasted different there as it was more “*Indianized*” and prepared with some Indian spices. In Singapore, they found Chinese food to be too “*raw*” and lacking of gravy and taste. Participants in the study of MAHADEVAN (2003) consumed Chinese, Italian and Mexican food outside. Similar to migrants in the present study, they did not enjoy Chinese food in the US. As a reason they mentioned the different taste compared to Indian-Chinese food back in India as well. Furthermore, participants in MAHADEVAN’s (2003) research enjoyed Mexican food for the same reasons as migrants in the present research. Participants in both researches identified similarities in the two cuisines like the breads, the spices and lentils. However in MAHADEVAN’s (2003) study migrants classified Italian food as “*bland*” while in the present study, Italian food was thoroughly enjoyed. This might be due to the strong influence by children of present interview partners who ask their mothers to prepare Italian food regularly. Most participants with children stated that their children like to eat pizza, pasta and they visit fast food restaurants from time to time for the children’s sake. Two migrants allow their children to eat meat because they do not want them to be excluded from the “group”. This indicates a higher tendency to eat NIF for the second generation of Indian migrants in Singapore. They are acquainted with new foods in kindergarten, at school and when visiting friends. For further research, it might be suggested to investigate the children’s diet as well.

Fast Food: This study examined the migrants’ consumption of Western fast food due to the meaningful contrast in the number of Western fast food chains in India compared to Singapore (please refer to chapter II 7 for further information). Twenty-three participants ate Western fast food in Singapore to a certain extent. Eighteen of them consumed this type of food for the first time in Singapore. These findings differ from MAHADEVAN (2003) who found that

younger Indian migrants living in State College, US, already ate fast food in India at least once per week. However, migrants in MAHADEVAN's (2003) study came predominantly from Indian cities like Delhi and Mumbai, where a higher presence of Western fast food chains and consequently a higher exposure can be assumed. While participants in the present study came predominantly from South India and reported that by the time they left India, Western fast food chains were not common in the cities, let alone in the towns. Higher fast food intakes were identified in the present study among migrants who live in Singapore for between one and six years. These results match those observed in earlier studies. GUPTA (1975) found in his study that recent migrants living in the United States for one to three years, primarily consumed American fast food. In the present study, eight participants kept their fast food intake to once per week or more even after staying for longer time in Singapore. Most participants reported they have reduced their fast food intake after their initial phase in Singapore, because they found better alternatives or because they realized that fast food might not affect their health in a positive way. The high health communication in Singapore seemed to influence the migrants' diet in a positive way. While the tradition of one company for ordering fast food for dinner and the related advantages in saving money and time countered the positive influences of high health communication and lead these migrants to eat fast food.

Meat intake: Out of nine participants who ate non-vegetarian food on regular base, five increased their meat intake in Singapore. These findings seem to be consistent with the results of VARGHESE AND MOORE-ORR (2002), who identified increased meat intake for Indian migrants living in Newfoundland. HOLMBOE-OTTESEN AND WANDEL (2012) observed in their research on the diet of South Asians in Europe that migrants increased their intake of meat while at the same time they reduced their intake of pulses. Although this fact was not explicitly examined in the present study, it can be assumed, that participants who increased their meat intake also decreased their consumption of pulses. Because the increased meat intake was reported via a higher consumption of fast food, like burgers, which usually are not eaten along with pulses. Furthermore, migrants consumed more meat when they ate in food courts or hawker centres. Typical meat dishes are served there with rice and vegetables, rather than with pulses. This might confirm the findings of HOLMBOE-OTTESEN AND WANDEL (2012). LESSER, GASEVIC AND LEAR (2014) identified an increased intake of red meat in association with the South Asian migrants length of stay in Canada. These findings are similar to the results of GUPTA's (1975) research, who found Indian migrants living in US for four to 15 years were very familiar

with American food and also started to eat beef. In the present study, only three participants ate beef and all three came from Kerala, India's state with the highest beef consumption¹⁴. Other participants who consumed meat or increased their meat, underlined, that they did not eat beef. Only one of them reported, he had beef when he lived in US, due to the low variety of food there. He stopped eating beef once he lived in Singapore. Compared to US, the overall consumption of beef is low in Singapore; hence, the beef supply in outside food might be lower. Chicken is the most preferred kind of meat in Singapore and it is the preferred kind of meat for interview partners. This might be one reason why there was no necessity for participants in this study to start to eat beef. While in GUPTA's (1975) study 60% of the vegetarian participants started to eat meat two to seven years after they migrated to US, in JONNALAGADDA AND DIWAN's (2002) study none of the 61% vegetarian Gujarati Asian Indian immigrants in the US changed to a non-vegetarian diet. In the present study, two vegetarians reported they have tried to eat meat several times. Nevertheless, this happened in India already and they admitted they would never change to a complete non-vegetarian diet. All vegetarian participants (n=14) maintained a vegetarian diet in Singapore. Those who ate out for lunch complained about the low availability and variety in vegetarian food in Singapore. Although some participants mentioned this limited their diet in a meaningful way, none of them started to eat non-vegetarian food. Participants narrated that if their parents in India would come to know that they start to eat meat, they would be disappointed about this. The intense relationship between the participants and their parents, which was still present over the long distance, might be one possible explanation for why the interview partners hold on their vegetarian diet.

Interestingly, participants rarely, some even never, used the word "meat" during the interviews. Instead, they used the term "*non-veg*" or "*non-vegetarian*" food. Reasons for this can be related to "ahimsa", the Indian belief of non-injury or non-violence to living beings. Although Brahmins predominantly believe in ahimsa, non-Brahmins and both Christians narrated during the interviews that they do not want animals to be slaughtered for them (however, both Christians were meat eaters). The word "meat" might be referred to the unpurified process of killing animals and therefore it might have been avoided.

Healthy food: Fourteen participants practised healthy modifications in their diet to different extents since they live in Singapore. These results agree with the

¹⁴ <http://www.thehindu.com/todays-paper/tp-national/tp-kerala/state-tops-in-meat-consumption/article2428440.ece> (last verified 16.3.2014)

findings of other studies, in which migrants undertook healthy modifications within their diet (ROSENMÖLLER ET AL. 2011; LESSER, GASEVIC AND LEAR 2014). One reason might be the close relationship between food and health in the Indian culture (please refer to chapter II 5.3). Most participants were found to have basic knowledge about characteristics of a healthy diet and in addition, they were aware of diet-related disease. Some also knew about the prevalence for Indians to experience diet-related disease. Participants reported that the health communication is overall higher in Singapore and they had access to new information about healthy foods or eating habits. Exposure to the host country in the form of media, colleagues or friends affected their dietary acculturation by changing knowledge, attitudes and beliefs concerning diet and health. The emphasis, which the Singaporean government placed on health communication in the country, as described in chapter II 6.4, might have contributed to this. These findings are consistent with the results of LESSER, GASEVIC AND LEAR (2014). In their study, 70% of their sample of South Asian migrants reported they receive more information about a healthy diet through media and advertisements since they live in Canada. These findings are confirmed by ROSENMÖLLER ET AL. (2011). More than 60% of the Chinese migrants in their research stated they have heard more about healthy foods through media and advertisements after their migration to Canada.

Some women in the present study explained that these changes towards a healthier diet would not have been possible in India. First, because there are festival celebrations and ceremonies all year round. On these days, it is the tradition to prepare sweet and fried foods in large quantities, which will be shared with family, friends and neighbours. So, even if they do not have a ceremony at home, they will always be offered by sweet or fried festival food from neighbours or friends. Second, the joint family is still common in India and even if a couple or young family does not live together with the parents, they live in a house close by and are responsible for preparing the elder family members' food (chapter II 5.4). In particular, women explained that their parents-in-law preferred traditional Indian food for all meals and were not very open to other food. Also in MEHROTRA's (2004) research, Indian women in the US reported to have more flexibility in the type of food they prepare there, compared to in India, where they lived with the joint family. So, while the higher health communication in Singapore informed migrants about certain aspects of a healthy diet, living away from the family allowed them to implement these aspects in their diet. In this aspect, the previously identified strong influence from the mothers back in India can assumed to be irrelevant. In addition, some participants reported that they convince their parents back in India to undertake

certain changes in their diet e.g. decrease the rice intake or change to olive oil in order to eat healthier.

When participants reported about higher health communication in Singapore, this included predominantly information based on the Western model of a healthy diet. However, alongside taking up some of these health recommendations, participants kept practising eating habits based on the Indian model of a healthy diet. This included the usage of certain foods as home remedies. In addition, mothers reported that they give their children ghee on a daily basis. Mostly they serve the ghee on rice. Women talked about the health effects of ghee. Some explained it assists brain developing in children, others said it covers the mucous membrane of the stomach to protect it from spices. One mother, who continued to give her children ghee, included garlic in her family's diet, even though it was against her caste regulations. She broke that restriction because she learnt in Singapore that garlic is healthy. This example demonstrates that migrants were open to learn and practice Western health recommendations, while at the same time they maintained Indian health practices and could combine both practices in one meal.

Food purchasing: The process of food purchasing was investigated as it provided relevant information about the emphasis that migrants put on their grocery selection. Literature research showed that there is a preference for purchasing food in India from Kirana stores or at wet markets (chapter II 5.2). In Singapore, small shops, similar to Kirana stores, can be found in HBD areas, offering a section on spices and general foods. Some participants reported they buy their foods from there occasionally. However, overall participants visited the local supermarkets for grocery shopping and Mustafa to buy Indian spices. Some women mentioned they purchase their vegetables from wet markets. Overall, Indian migrants reported they get all ingredients in Singapore, while most of them imported homemade spices from India. Except for one woman, none of the interview partners seemed to miss the Indian way of grocery shopping. They were all content with the grocery shopping in Singapore and never mentioned this aspect in a negative way. KUMAR AND BISHNOI (2011) and VEMULA ET AL. (2013) identified an increased purchase of packed food among high educated Indians living in India. Participants in this study mentioned to use packed food like ready-made dough for dosa or idli occasionally. Packed foods provided a relief for full-time working participants but also for Indian mothers. Participants did not mention if they increased their usage of packed food in Singapore, however as most participants did not cook in India, an increased usage can be assumed. Overall, the supply of Indian groceries in Singapore's local supermarkets as well as in Mustafa was found to be sufficient and did not

influence the migrants eating behaviour in a meaningful way. These results differ from some published studies. In MAHADEVAN's (2003) about Indian migrants in US and also in PENG's (2005) research on Chinese students in US migrants reported they could not purchase all of their traditional foods in local supermarkets and hence they substituted some items with American groceries. The availability of Indian foods can assume to be different, depending on the host country and if the participants live there either on the countryside or in an urban area. In addition, the presence of a higher Indian diaspora in the host country might have an influence on the supply of Indian groceries. The availability of traditional groceries is likely to influence the migrants' eating behaviour. However, with a high comprehensive Indian diaspora in Singapore and consequently a high supply of Indian foods, this aspect was not of major importance in the present study.

Traditional Indian food: Home remedies and festival food represent an important part in the Indian eating culture (chapter II 5.3). Therefore, changes in the consumption of these foods are one aspect for dietary acculturation. MAHADEVAN (2003) found her Indian participants in State College, US celebrating Indian festivals and rituals on a large scale. Findings of the current study do not support these results. Women in Singapore prepared both, home remedies as well as festival foods, but mostly they prepared them to a lower extent. Only some women reported celebrating all Indian festivals in Singapore. Men living together with their flat mates and working full time reported that they do not prepare these foods in Singapore, some of them eat festival food in restaurants. Only two men narrated they cook festival foods in their Singapore homes. Women still maintain the traditional role in the household kitchen. These findings confirm the role of Indian women as bearer of Indian traditions identified in the studies of MEHROTRA (2004), RAYAPROL (2005) and DASGUPTA (1998) about Indian migrants in US. In these studies women were the persons in charge who maintained and forwarded the traditions in the family. However, some women mentioned they were glad about the decrease in the need to prepare festival food in Singapore. This allows them to eat less fried and sweet foods. Interestingly, Indian women in the study of KARIM ET AL. (1986) criticised the lack of control and choice of food at community functions and the social pressure to eat and prepare heavy, fattening foods at gatherings. They regretted that cultural values encourage them to consume traditional foods, which are often very oily. However, the study of KARIM ET AL. (1986) was conducted in 1986. At this time, the pressure also for Indian migrants living in the diaspora to follow cultural rituals and Indian festivals might have been still higher than those for migrants who live today in the modern country of Singapore. In MEHROTRA's

(2004) study some Indian women in US missed Indian ceremonies but they admitted that they did not miss the additional housework associated with these occasions. This was confirmed by IP r who narrated that preparing festival foods in India was very time-consuming, while in Singapore it is easy to buy ready-made sweets or powder to prepare them easily.

Home remedies were mainly prepared less due to the lack of knowledge, but also because children did not like the taste of Indian home remedies. Although in the past, Ayurveda was of great importance in India and part of the Indian diet, only two participants related special eating habits or the use of home remedies to Ayurveda. Most of the participants had heard of Ayurveda but narrated it was never of great significance in their diet. Some mentioned that home remedies or eating traditions might be based on Ayurveda, but their mother never used the term, as they might not have been aware that their practices are based on Ayurveda. This might be one reason for the low significance of Ayurveda in the migrants' diet. Another possible explanation for this might be that the relevance of Ayurveda is losing significance over the time also in India. Most participants stated to go to an allopathist when they are sick while they lived in India or when they are there for a home visit.

Surprisingly only the study of MAHADEVAN (2003) examined festival celebration and festival food in her study. None of the other previous studies about eating behaviour of Indian migrants investigated these traditional aspects of the Indian eating culture.

The model of KOCTÜRK (1995) assumed that dietary modifications in the host country might start by the incorporation of new accessory foods, while staples will be the last food items which might be changed. The findings of the current study do not support this model. Participants identified spices, classified as accessories, as *"the Indian taste"*. They either import handmade spices from their mothers in India, mix the spices by their own or travel to Mustafa regularly in order to get authentic Indian spices. None of the interview partners talked about a substitution of Indian spices to Western spices. Indian spices, were an important part of the participants cultural identity. While rice, assumed as a staple food for South Indians, experienced different priorities. Similar to Indian spices, rice was named by participants as a major part of the Indian cuisine and most of them stated, if they would not have access to Indian food, they would mostly long for rice and spices. Nevertheless, some of these participants realized that a high consumption of rice might be unhealthy and started to reduce their rice intake to different extents. This applied to participants

independent of their length of stay in the host country. Hence, KOCTÜRK'S (1995) assumption that the staple food might be the last food to change in the host country is not confirmed in the present study.

2.2. Affecting factors on dietary acculturation

This study examined affecting factors on dietary acculturation based on the model of SATIA-ABOUTA (2003). In addition to the affecting factors in this model, namely socio-demographic, cultural, environmental and psychological factors, the participants' mothers had been identified as meaningful influence on the migrants' diet. Affecting factors will be discussed with more detail in the following.

Socio-demographic factors: Previous studies on the eating behaviour of Indian migrants identified an interrelation between diverse socio-demographic factors and their affect to migrants' eating habits (GUPTA 1975; RAJ, GANGANNA AND BOWERING 1999; CHAPMAN, RISTOVSKI-SLIJEPCEVIC AND BEAGAN 2011; MAHADEVAN 2003). However, in the present study, some socio-demographic data were found to be closely related to each other. Therefore, three major groups could be generated based on diverse socio-demographic data and the comparison to other studies will predominantly be based on these groups.

Group 1 (The Unsettled) included younger participants between 20 and 31 years, who lived in Singapore for four years or less. They all lived with flat mates and worked eight hours or more per day.

Group 2 (The Settled) were married women who lived together with their families and worked either part-time or were housewives. They were between 36 and 47 years old and stayed in Singapore for seven years or more. Seven of these interview partners had children.

Group 3 (The Traditionalists) included two women who lived together with their families and were both working full-time. They were 27 and 31 years old.

In group 1 (The Unsettled), nine participants reported weight changes. While four Indians lost weight, five gained weight since their relocation to Singapore. Considering, that migrants in this group lived in Singapore for four years or less, these results are in contrast to the findings of CAIRNEY AND OSTBYE (1998) and HIMMELGREEN ET AL. (2004) who found that migrants prevalence for excess

weight and obesity increased with the length of time staying in the host country. They argued one reason for this might be an increase in the overall caloric intake and increasing proportion of calories from fat. However, migrants in the present study, who reported about weight changes suffered not only from weight gain but also from weight loss. Most of them attributed their weight changes to the hard time they had after relocating to Singapore and the problems with finding proper food. Participants in group 2 (The Settled) and 3 (The Traditionalists) seemed to be more settled in Singapore and in arranging their daily meals. They were found to be more health conscious and aware of their weight. Although three participants of group 2 (The Settled) reported weight gain, they were aware of this and tried to lose weight. Hence, in this study weight changes were found to be more likely in the group of participants with a shorter length of stay in the host country.

Another relation between the length of stay in the host country and the eating habits were found in the study of KUDO, FALCIGLIA AND COUCH (2000). They reported that first generation Japanese women in the United States were more likely to maintain their traditional diet, while second and third generation women adopted more and more foods and eating patterns of the host country. Although the present study examined only first generation Indian migrants in Singapore, mothers reported that their children are more likely to eat NIF compared to them. The children are more exposed to NIF in school, kindergarten and when meeting with non-Indian friends. This suggests that the children, who form the second generation of Indian migrants in Singapore will show a similar eating behaviour towards NIF, as second and third generation Japanese migrants in KUDO, FALCIGLIA AND COUCH's (2000) research. These findings also support the results of SATIA-ABOUTA ET AL. (2002b) and PAN ET AL. (1999) which showed that younger migrants were more likely to change their eating habits compared to older migrants who prefer the traditional Indian diet. This applies to the migrants' children in the present study as well as to participants of group 1 (The Unsettled). However, it has to be admitted, that participants of group 1 (The Unsettled), who ate more NIF due to the compulsion to eat lunch outside, did not enjoy these NIF and preferred Indian food whenever they could. While older migrants who ate NIF more rarely compared to group 1 (The Unsettled), but therefore they ate it by their own choice and enjoyed food from other cuisines much more. A possible conclusion might be that older migrants of this group change their eating behaviour slower but with more consistency.

A higher meat intake in this study was found for five male migrants of group 1 (The Unsettled) who lived in Singapore four years or less. These results differ from MÉJEAN ET AL. (2009) results. Male Tunisian migrants living in France for

more than ten years in the study of MÉJEAN ET AL. (2009) had a higher meat intake than male migrants staying there less than ten years. While in both studies men are found to increase their meat intake, it has to be admitted, that MÉJEAN ET AL. (2009) included exclusively male migrants. Furthermore, in the present study, out of the ten non-vegetarians, seven were men. In addition, the two men who did not increase their meat intake reported high meat consumption. Overall, in this study, only three out of 14 women ate meat and all three reported no changes in their meat intake. These findings might suggest that men are overall more likely to eat meat, which is coinciding with the situation in the whole of India, where more women (33%) than men (24%) tend to be vegetarian (ARNOLD ET AL. 2009). As Hinduism is related to vegetarianism and women were found to be the bearer of Indian traditions and religion (DASGUPTA 1998; MEHROTRA 2004; RAYAPROL 2005), this might be one reason for the higher number of vegetarians between Indian women.

In the present study, a consumption of fast food once per week or more could be identified for younger migrants between 20 and 30 years mostly belonging to group 1 (The Unsettled) and mostly men (n=6 out of 8). A more frequent consumption of fast food by male migrants compared to females was also examined by JASTI, LEE AND DOAK (2011) among Korean migrants in the United States. One reason for the higher fast food intake among male migrants might have been their exposure to these kinds of foods. In this study, more men than women were working full-time and consequently had higher exposure to fast food, which was ordered as dinner in their company. Furthermore women were found to be more health conscious and the predominant number of women (n=11) were vegetarians and mentioned they did not find many food options in fast food restaurants. That could be a reason for their lower intake. The migrants' income might provide another motivation for the fast food intake. PAN ET AL. (1999) found in their study that Asian students in the United States ate more fast food than traditional meals due to the lower prices of fast food. This is not relevant in Singapore, as prices for food in food courts and hawker centres were comparable to fast food prices. Nevertheless, profitability might have been one reason for regular fast food consumption, due to the habit of these migrants' company to order fast food for dinner for employees who work overtime. As these meals were for free, migrants saved their cost for dinner. Another characteristic of participants with high fast food intake was their length of stay in Singapore, which was five years or less. Some participants reported they ate a lot of fast food during their first month or years in Singapore. They stopped because they did not like the taste or got more health conscious after some time. This fits with the results of GUPTA (1975), who found in his study that

Indian migrants living in the US between three to five years had a higher fast food consumption. An increase in health consciousness as reported by Indians in this study might be one reason for reducing their fast food intake. In addition, changes in the household composition, but also an improved knowledge of alternative foods in Singapore might have influenced the decreased fast food consumption.

Studies on migrants from Middle America in US investigated the relationship between dietary acculturation and the migrants' language speaking skills. A decreased consumption of fibre, fruit and vegetable intake or an increased intake of artificial drinks were found to be related to higher skills in speaking the host countries native language (HIMMELGREEN ET AL. 2005; MONTEZ AND ESCHBACH 2008). In the present study, all participants showed good English speaking skills. Previous studies on Indian migrants in the US also examined good skills in the English language for Indian migrants (KANKIPATI 2012; MAHADEVAN 2003). Highly educated Indian migrants tend to arrive in the host country with good efficiency of speaking and writing English. Hence, this is not an influencing factor on the diet of Indian migrants in host countries where English is the major language. However, in Singapore's hawker centres and food courts some stalls, especially the Chinese and Malay ones, label their foods with the native names that are written in English letters, but these are not familiar to migrants who newly arrived in the country. This was one reason why vegetarian participants in particular mistrusted these foods, as they did not know what to expect behind the names. Asking the vendors can be difficult, as they often speak little English.

The eating behaviour of group 1 (The Unsettled) was found to be independent on the participants' gender. Despite the fact that only three women were included in this group, they showed the same eating pattern as their male counterparts. IP v got married a few weeks before the interview was conducted, but she still lived without her husband. She narrated that she might need to start cooking once they live together. These findings indicate that women overtake their traditional roles as bearer of the Indian food and culture only after getting married. As long as they live with flat mates, their eating pattern did not differ from the males who also lived with flat mates. In this study, the Indian men who lived together with flat mates were even more likely to cook Indian dinner compared to their female counterparts in the same household composition. These findings do not support the research of MAHADEVAN (2003) wherein Indian men stated they eat less traditional foods in State College due to their lack of cooking skills.

The household composition had a significant influence on the migrants' eating behaviour in the present study. Some migrants in group 1 (The Unsettled) reported that they lived with their parents before and mainly their mother took care of their diet. Now in Singapore they live together with flat mates and are responsible for their diet on their own. This provided meaningful problems for these participants that lead to an unbalanced diet in Singapore. These findings mirror those of the study of PAPADAKI AND SCOTT (2002) on the eating habits of Greek students in Scotland. 70% of their participants stayed with their parents before their relocation to Scotland. Similar to the report of the Indian participants in Singapore, Greek students reported that their mothers purchased and prepared their food. In Scotland, they took responsibility for food by themselves for the first time. The authors suggest this fact had, amongst others, an influence on the participants' dietary changes.

The eating behaviour of IP x, who lives together with her Indian grandparents in Singapore is congruent with the findings of SATIA-ABOUTA ET AL. (2002b). Similar to the case of IP x, SATIA-ABOUTA ET AL. (2002b) examined that older family members, who prefer a traditional diet had a strong influence on the diet of all members living together in the household. Even if the younger family members in the house have extensive exposure to the host country in the form of fluent language skills and working outside home, like IP x, they will keep their traditional diet due to the elderly's strong influence. Only one woman who lived together with their Indian grandparents was examined in this study. For further studies, it might be interesting to compare a bigger sample of women living in this household composition to women in other working and household situations in Singapore. Living together with children presented another significant influence to the migrants' eating behaviour. Mothers reported that their children like to eat NIF, especially Italian food. Depending on how accommodating the mothers were during cooking to meet their children's preferences, NIF was cooked between several times per week to once per month. Children's preferences also influenced the consumption of Western fast foods. However, mothers tried hard to keep the consumption of these foods low for their kids and Western fast food restaurants were reported to be visited rarely or around once per month. However, mothers underlined that it is also important for them to forward the Indian traditions to their children and teach them about Indian food. These influences by children on the migrants' diet was also reported by MAHADEVAN (2003). In her study, Indian children in US requested their mothers to prepare American and Italian food from time to time. Mothers followed these requests to make sure the children assimilate well in US. However, at the same time they made sure the children knew their traditions by eating Indian foods on

a regular basis. In the study of SUWANDINATA (2012) on influence of children on the families food buying and consumption process, 86% of parents believed that children influence the families process of grocery shopping and consumption. This strong influence by children seemed to be the same in a migrant family. Beside the children's influences, migrant women, in addition, deal with keeping their families' traditional diet and try to find a balance, which suits all requirements.

Some findings in the present study are similar with results of previous research on Indian migrants from different parts of India or South Asia (GUPTA 1975; HOLMBOE-OTTESEN AND WANDEL 2012; LESSER, GASEVIC AND LEAR 2014; MAHADEVAN 2003). This refutes the assumption that was undertaken at the beginning of the research, saying that dietary acculturation of South Indian migrants might be different to dietary acculturation from migrants of other parts of India or South Asia due to the different eating cultures in these parts. JONNALAGADDA (2002) supported the theory about variations in participants' dietary intake depending on their region of origin. Also DEVINE ET AL. (1999) identified that the factors influencing food choice differ depending on the ethnic group. They found that not only the different eating cultures, but also the importance of food in the migrating ethnic group is of significant relevance for dietary changes in the host country. However, further studies are necessary to investigate differences in the dietary acculturation of different ethnic groups. Furthermore, beside the fact that all three participants who consumed beef came from Kerala, no significant differences could be identified in the dietary modification of migrants from different South Indian states. Nevertheless, participants of the four South Indian states were represented in unequal sample sizes and could therefore not be compared reasonably.

Cultural factors: In the present study, cultural factors like caste and religion mainly influenced the migrants' vegetarianism, including the consumption of eggs as well as onions and garlic. Caste related rules in the migrants' social eating behaviour had no relevance for them in Singapore. They ate food in restaurants where meat was served and eating beside someone from a lower caste was no issue at all, as the caste system has no significance in Singapore. Some vegetarians justified their resignation from eating meat for ideological reasons, rather than religion. Nevertheless, they admitted that their parents and grandparents are vegetarians due to their caste and religion, so they adopted this family tradition. Interestingly, Hindu Brahmins in the research of MAHADEVAN (2003) gave similar statements. They identified themselves as Hindu Brahmins by birth, but followed the Brahmin way of eating because their parents and grandparents did so and not due to their religious beliefs. These findings

suggest that the relationship of religion and diet lost significance for Indian migrants. This might be confirmed when considering the study of BHARMA ET AL. (2013) who examined the relationship between diet and religion. They found highly religious Hindus and Sikh were more likely to be overweight. Highly religious migrants were mostly older, female, less educated and less acculturated. As one reason for their findings, the researchers supposed the consumption of food and drinks at religious gatherings. BONNE ET AL. (2007) reported that less religious Muslims migrants in France practiced more “egocentric” consumer decisions, while the more religious Muslim migrants were found to be more sensitive to the norms and rules prescribed by their religion. Indian migrants in this study overall also prepared less festival food and consequently consumed less sweets and less fried food. It is difficult to set these modifications clearly in relation to a loss on religiosity; however, it suggests that the relationship between food and religion became looser in Singapore.

Psychological factors: This study identified a preference for Indian foods among the participants. Results are confirmed by the findings of RAJ, GANGANNA AND BOWERING (1999). In their study 63% of the participants preferred mostly Indian foods while 31% ate traditional and non-traditional food equally. Only 6% of their participants consumed either Indian or NIF exclusively. In the present study, several reasons were found to influence this preference for Indian foods. Trust was one reason for Indian migrants to prefer Indian food. Due to the “*different concept*” of vegetarian dishes in Singapore, they could never be sure to receive completely meatless food when ordering vegetarian dishes. This is similar to the findings of MAHADEVAN (2003). A clear declaration of meatless dishes would help migrants to keep their vegetarian diet and provide a higher selection of foods for their consumption. Another reason for the participants’ preference for Indian foods was nostalgia. Especially for Indian migrants from group 1 (The Unsettled), Indian food recreated memories of time spent with their family or friends back in India. Although participants narrated they find all Indian ingredients in Singapore’s supermarkets, they missed the homemade foods from their mothers. They found themselves not able to duplicate these dishes, but had intense contact with their mothers in order to prepare similar dishes. Nostalgia for traditional food is also described by HODGES AND WIGGINS (2013) in their study about migrants in London. The influence of nostalgia in the present study seemed to be weakened by the length of stay in Singapore. For women who stayed in Singapore for seven years or more and lived with their families, nostalgia to Indian foods was not a big issue. These women prepared traditional Indian foods on their own. Sometimes they still sought out their mothers’ help

when cooking, however they were able to reproduce their mothers' recipes and having their own family in Singapore weakened the feeling of nostalgia. Independent of socio-demographic influences, cultural identity and taste influenced the migrants longing for Indian food. IP u mentioned she grew up with this taste and it was hard for her to get used to other food. Rice and Indian spices were named in relation to the Indian cuisine and as the ingredients, which would be missed first. Cultural and personal imprint of taste in early childhood hamper modifications in the migrants' diet. This is also shown in their preference for NIF. While most migrants disliked Chinese food for its different taste, smell and consistence, they liked Mexican and Thai food due to its similarity to the Indian cuisine, which evokes confidence. The preference for Indian food due to health reasons was also found to be autonomous from socio-demographic influences and more dependent on the migrants' personal attitudes. These findings are different from the results of SATIA-ABOUTA ET AL. (2002b) who found younger participants, who worked outside home, did not believe that the Chinese diet is healthier than a typical Western diet. In the present study, some participants preferred a traditional diet because they supposed it was healthier, others preferred Indian food but were open to modifying their Indian diet for some healthier choices and did not believe Indian food was healthier than NIF.

Environmental factors: When talking about the availability of Indian foods in Singapore, two aspects were distinguished by the participants, the availability of Indian items in grocery shops and the availability of Indian food in food courts, hawker centres and restaurants. Migrants' reported to find all Indian items in the local supermarkets or at least in Mustafa. Although some participants missed a few Indian vegetables or spices, they underlined that this was not an issue in their daily diet. Although, these results differ from some published studies (MAHADEVAN 2003; PENG 2005), they are consistent with those of KARIM ET AL. (1986) and RAJ, GANGANNA AND BOWERING (1999). The discrepancy in the findings between these studies and the one of MAHADEVAN (2003) might be based on the fact that the latter study was conducted in a relatively small town of State College, while the other studies took place in big cities, including a bigger Indian diaspora and consequently a higher supply of Indian groceries. Low availability is likely to influence the eating habits of a migrant population. As all Indian foods were available and affordable in Singapore, this issue was not of big influence to the participants of the present study. But migrants reported about the low availability of authentic Indian food in food courts, hawker centres and restaurants. Some stated authentic Indian food could be found in the Indian restaurants of Little India, which is too far to travel for lunch. Others narrated

that even these restaurants lack typical Indian food. This was identified as one of the most affecting factors to migrants of group 1 (The Unsettled) who were forced to eat lunch outside and occasionally dinner. The migrants named the unavailability but at the same time also the low variety of Indian food outside of the home as reason for their increased meat and fast food intake as well as the increased consumption of NIF. Singapore-Indian food was by most participants said to be not authentic Indian and therefore not tasty. These findings also demonstrate that an adequate supply of ethnic groceries does not deter migrants from dietary modifications in particular when the supply outside of the home is lacking authentic Indian food.

Indian mothers: It was not surprising that Indian migrants named their mothers as those with the biggest influence on their eating behaviour so far. However, Indian mothers were identified as keeping this significant influence on the migrants' diet even when they are thousands of kilometres away. They forwarded easy to cook recipes to their children on the phone, told them which foods they should eat to stay healthy, requested them to practice fasting days when sick or for religious reasons, taught them about festival food and about which food is best for their children. Indian mothers might be described as what LEWIN (1943) called the "gatekeeper" – but in the far away background. Although they are not in the position to control exactly which foods are eaten by their children, they kept a significant influence to their children's' diet. KAKAR AND KAKAR (2007) wrote about the intense relationship between Indian sons and mothers, which was also found between the mothers and daughters in this study. Participants showed a high respect before their parents and none of them questioned whether or not to follow the parents' suggestions. Furthermore, participants mentioned the close social network between friends and relatives in India and Singapore, which would ensure, information about their actions would be shared with their parents. As one example, the consumption of meat was named and one of the interview partners stated that his parents would be disappointed to hear if he started to consume meat in Singapore. At the same time, participants explained that their parents never forced them to eat a special diet, they just exemplified their values of a Hindu diet to them and the high respect to their parents motivated the children to follow these values. CHADHA (2004:72) described the role of the elderly in Indian families:

„(...) the elderly enjoy high respect and command by being regarded as the storehouses of knowledge and wisdom within the family and community contexts.“

These findings were not previously described in studies on Indian migrants. Two possible explanations for this exist. First, Singapore is considered as a collectivist society similar to India. In both societies, family is of important value

and mothers command great respect. This makes it easier for Indian migrants to maintain their strong relationship to their mothers, while it might be harder to keep this relationship in individualistic countries, where people from the host society practice a more loosen relationship to their parents. Furthermore, the shorter distance between Singapore and India compared to India and US or Europe (where previous studies took place) might allow a more intense relationship. Due to this shorter distance, a higher number of friends and relatives of the families live in Singapore who are likely to report to the parents back in India. This makes it easier for the parents to keep controlling their grown up children.

These interesting findings in the present study demonstrate the strength of values in a collectivist society and their influences on the migrant populations' eating behaviour.

2.3. Dietary acculturation in context of the acculturation process

Several studies found an interrelation between acculturation and dietary changes of migrants (HIMMELGREEN ET AL. 2005; LESSER, GASEVIC AND LEAR 2014; MONTEZ AND ESCHBACH 2008). However, most of these studies investigated acculturation based on socio-demographic aspects like length of stay in the host country or age. HUNT, SCHNEIDER AND COMER (2004) have criticised the concept of acculturation due to its conceptual flaws. Furthermore, they mentioned that most studies on acculturation neglect investigating cultural changes. This aspect on acculturation measures was also criticised by CABASSA (2003). The present study used a combination of an acculturation scale and single acculturation aspects, including cultural aspects, as an approach.

Eighteen out of 23 participants who completed the EAAM tend to be integrated in Singapore. As described by BERRY AND KALIN (1995), the integration strategy requires a multicultural host country. If the population in the host country, as well as the government, appreciates a society with cultural diversity and holds low levels of prejudice and positive common attitudes among cultural groups, migrants are provided with the possibility to integrate (BERRY 2005). Singapore, described by HUAT (2003) as a "*settler country*", that is historically formed by inhabitants from different cultures, provides an ideal context to allow the integration of Indian migrants. Furthermore, both countries were identified in previous studies as collectivist societies concerning their family life and social network. This might make it easier for Indian migrants to integrate in a society that shares the same values. However, results need to be considered differentiated, which will be preceded in the following.

Consistent with previous research (BONNE ET AL. 2007; KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; ŠKREBLIN AND SUJOLDŽIĆ 2003) this study revealed that eating habits are one of the last patterns that migrants change in the host country. The migrants changed diverse aspects within the acculturation process to a higher extent than their diet. Language and clothes were two examples for this. All migrants showed good English speaking skills. Participants living together with their children, stated to speak a “*mishmash*” of their native language and English. They tried to put an emphasis on learning their mother tongue with the children, which not works often as the children mostly speak English in school. Interview partners who lived together with Indian flat mates were also forced to speak English at home, as the flat mates came from other states of South India and therefore spoke another language. Results of the EAAM confirm good English speaking skills and the use of the language in daily life. Male participants completely adapted to Western clothes. They all came to the interview in Western clothes, and in private meetings, they wore trousers and T-shirts. Some women joined the interview in Western clothes; others wore Saris [traditional Indian clothes]. Most of them also stated they wear Saris for special occasions in Singapore, one even on a daily basis. Furthermore, results from the EAAM also showed that participants are mostly integrated or assimilated. Results concerning acculturation in psychological aspects showed good wellbeing of women who lived together with their families. Participants who lived with flat mates found pros and cons in their life in Singapore. Most of them like the country and enjoy life in Singapore, even if they cannot imagine staying there forever. Cultural aspects towards acculturation such as temple visits and festival celebration, indicated that participants try to keep their culture but to a lesser extent. Beside these changes in the migrants’ daily life, which predominantly indicated a tendency towards integration, they overall preferred to eat Indian food. SANJUR (1982) confirmed that eating habits are “*resistant to change*”. Eating habits are acquired early in life and they are deeply rooted in our cultures. Consequently researchers found eating habits particularly resistant to change and to be one of the last changes within the acculturation process (BONNE ET AL. 2007; KITTLER, SUCHER AND NAHIKIAN-NELMS 2012; ŠKREBLIN AND SUJOLDŽIĆ 2003). As explained by KITTLER, SUCHER AND NAHIKIAN-NELMS (2012:4)

“(…) Foods that demonstrate affiliation with a culture are usually introduced during childhood and are associated with security or good memories (…)”

PARK ET AL. (2003) stated that eating habits may change more slowly because many meals are eaten in the privacy of the migrants’ home compared to other

more visible aspects of culture, such as language or clothing. This might be one explanation for Indian migrants' preference for traditional food.

As another motivation for this, the intensive relationship of Indian migrants between their culture, especially religion and traditions, and their diet have to be considered. Considering food as an important part of Indians' cultural identity, it seemed to be of high importance for the participants to maintain their traditional eating habits with the intent to beware a part of their culture. In the present study, this aspect applied mainly to women who lived together with their family. They explained their practices of doing puja and celebrating festivals, and how they shared these traditions with their children. SARAN AND EAMES (1980) and RAYAPROL (2005) found in their studies on first generation Indian migrants in the US that migrants put a strong effort on maintaining their cultural identity. They found Indians to be more eager to keep their religion and cultural identity after migration. DASGUPTA (1998) and RAYAPROL (2005) identified Indian women as the primary bearer of tradition in the family and the ones who pass it to their children. Overall results in the present study indicated that women who live together with their family and children are more resistant to changes, compared to men. They are more likely to wear traditional clothes, cook traditional food and pass the Indian traditions to their children. They also explained that they put an emphasis on teaching their children about traditional Indian foods especially festival foods.

Indian men in this study showed different behaviours in this. Men who were eager to eat Indian food as often as possible were also found to keep their religious rituals and traditions to a higher extent. These men reported strong connections to their mothers. While the ones who did not put much emphasis on Indian food termed themselves as not very traditional persons. They talked also less about their mothers during the interview. BHASKARANANDA (2002) wrote about the strong relationship between Indian sons and their mothers. Interview data indicated that food takes an important role in this relationship. It can be assumed, that men who keep a strong relationship to their mother also hold on more to traditional Indian food, and to Indian traditions in total.

Although the majority of men were very attached to their traditions, they were mostly found to eat more NIF and practice their traditions to a lower extent compared to the women who stayed at home. This was determined due to external influences and their higher exposure to the Singaporean culture. Men had to work full-time and got more exposure to NIF and non-Indian colleagues. This demonstrates that under certain circumstances, external influences are

likely to influence the eating behaviour to a higher extent than personal attitudes and cultural aspects.

Furthermore, a relationship between acculturation and overall well-being was identified for selected participants. Those who scored highest in the marginalization items of the EAAM were identified as the participants who reported weight changes. Migrants who lost weight to a significant extent, reported on difficulties during their initial phase in Singapore. These difficulties influenced their overall wellbeing in a negative way. These results differ from YASUDA AND DUAN'S (2002) research. They did not identify a relationship between the acculturation of Asian migrants in the US and their overall well-being.

Another interesting relationship between acculturation and dietary acculturation was shown by the decreased temple visits caused due to the increased consumption of meat in Singapore. Furthermore, IP p reported that he shortened his fasting period due to the limited variety of vegetarian food in Singapore as he is not allowed to eat meat during that time. This finding demonstrates an influence in the opposite direction: modifications in the migrants' eating behaviour affected their cultural life. Again, this is an example for the strong relation between diet and the Indian culture. No previous studies could be found which identified this aspect. Hence, it is suggested to put more emphasis on this in further studies

VI CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

Drawing on acculturation theory and previous studies of migrants' dietary acculturation, this research has explored continuity and alteration of the eating behaviour, including affecting factors, for first generation South Indian migrants in Singapore. Moreover, it investigated the acculturation strategies as well as psychological and cultural acculturation aspects in relationship to the eating behaviour. The findings lead to six main conclusions.

First, Indian migrants have a predominant preference for retaining their traditional eating behaviour and maintain an intense relationship with the Indian culture. Most participants (n=22) practiced the acculturation strategies of integration and separation and hold a willingness to maintain and forward traditions and rituals as much as possible. Unlike other behaviours in the migrants' daily life that indicate integration, like wearing predominantly "Western" clothes, speaking English to the same extent as their mother tongue and mingling with Indian as well as with non-Indian friends, eating behaviour was found to be one of the last habits that were modified within the acculturation process. Whenever the process of food consumption was practiced in private space and there was enough time, migrants preferred traditional Indian food. It provided a "*comfort zone*" for them to recreate memories of time spent with their family back home or of cultural heritage. Participants also explained Indian food is their "*soul food*" when they are sick or when they come back home from a long holiday. They were more confident with eating Indian food as they trust in these foods more regarding hygiene and the vegetarian concept. As a final point, Indian food was preferred as some participants believed it to be a healthier solution to NIF.

Second, socio-demographic aspects like household composition and working hours predominated as affecting factors before personal attitudes, food preferences and in some cases even religious and caste-related eating taboos. Although each of the interview partners brought along their personal attitudes, traditions and habits, overall maintaining their cultural life and eating behaviour was influenced by socio-demographic and external factors. One of the main modifications on the micro level was practiced within the breakfast items. The predominant number of participants changed their breakfast eating habits from a traditional Indian breakfast towards a so-called "Western"-style breakfast. Modifications were undertaken to different extents. Expounded reasons for the modifications were convenience, time and sometimes health. It is still common in India that married women, including when they are employed, get up early in the morning to prepare a traditional Indian breakfast for the family. In Singapore,

most women skipped this tradition and changed towards breakfast items like bread or cereals for their whole family. These breakfast items are significantly less time consuming to prepare. However, single men and women also did this change, as there was nobody who prepared the breakfast for them and they did not want to get up early in the morning just to prepare a traditional breakfast.

The participants' working hours regulated their spare time to organise food and keep their traditions, while their housing situation changed their priorities concerning their culture and diet. IP p summed it up with his statement:

"I think the situation is changing the habits." (IP p, line 638)

As one example to confirm this statement, IP p and IP g changed their eating habits significantly by reducing their intake of fast food and other NIF and packing Indian food for lunch, after their wives came back from India. At the same time, women became much more aware of healthy nutrition after their children were born.

In addition, environmental influences on the macro level were more significant than personal attitudes and religious taboos. The limited availability and variety of Indian food in Singapore, particularly vegetarian Indian food, induced some participants to a higher consumption of meat and fast food. Furthermore, the philosophy of their company to order fast food for employees' dinner, lead participants to an increased fast food intake, although this was against their personal taste and attitude. Participating in these company dinners, which were for free, might also be caused by economic and time reason in order to save money and be released from home cooking.

At the same time, a high availability of fruits and vegetables in Singapore as well as intensive health communication led to healthy diet modifications for more than half of the participants. Although these modifications were sometimes against the personal taste, attitude and a caste-related taboo, external influences promoting a healthy diet as well as an increased health consciousness in Singapore motivated participants to these modifications.

Third, acculturation strategies and psychological as well as cultural acculturation aspects are related to the eating behaviour in dependence to socio-demographic aspects. Full-time working participants (group 1 - The Unsettled), staying without their family, were forced to eat at least lunch, sometimes even dinner outside and due to limited availability and variety of Indian food, they often choose NIF. Consequently, their acculturation strategy of integration conformed to their eating behaviour. In contrast, when working hours

provided migrants sufficient time and children living in the house motivated them to maintain their culture (group 2 - The Settled), participants decided overall, to maintain their traditional Indian eating habits. Consequently, their acculturation strategy of integration was inconsistent to their eating behaviour.

Participants of group 2 (The Settled) , who were able to maintain their traditional eating habits up to their own demand and who were at the same time found to be integrated concerning their social and cultural life, seemed to be more settled in their overall eating behaviour and comfortable with life in Singapore. This group started to include NIF in their meals occasionally based on their own or other family members taste. When eating out they were open to NIF to a certain extend.

On the contrary, participants of group 1 (The Unsettled), who were forced to eat NIF for lunch or dinner for various reasons, were found to be less open to cook food from other countries. They preferred Indian food whenever they had the choice. Acculturative stress during the migrants' initial phase in Singapore caused a negative effect on their eating behaviour. Their problems to settle in Singapore and find familiar food, resulted in consequences like skipping breakfast, an increased fast food intake and eating overall less food, for example a few biscuits or fruits for dinner. This behaviour resulted in significant weight changes. Furthermore, the increased meat intake of some participants in this group caused a decrease in their temple visits. They were not allowed to visit the temple after eating non-vegetarian food. The overall eating behaviour of this group was still in a "transition stage" and they were less satisfied with their eating situation in Singapore as well as with their overall life in Singapore.

Interestingly, the fact that the Indian caste system has no significance in Singapore lead migrants to ignore the rules for social eating behaviour given by their caste as well as the taboo to eat certain foods. The only caste and religion related rule, which they maintained in their diet was the taboo of eating meat or of preparing it at home. Most participants did not handle avoiding eggs, onions and garlic as strict as the taboo to eat meat.

Fourth: HOLMES AND CLARK (1992) suggested that it is rarely possible to classify dietary modifications of a migrants sample overall as definitely positive or negative. Their presumption is relevant for the present study. While more than half (n=14) of the participants practiced some healthy modifications in their diet since living in Singapore, not all dietary changes were for the better. Tendencies within the participants eating habits could be identified for the described groups; however, the dietary modifications could not overall be ranked as positive or negative.

Fifth: Looking to the circumstances that Indian migrants face when moving to Singapore, at first glance one might not expect too many differences to their homeland. As Indians were among the first settlers since Singapore was founded in 1819, the Indian culture is anchored in Singapore's daily life. Exploring the Indian culture in Singapore showed what SINHA (2009) called a "mixing and matching". This was not only present as described by Sinha in religious subjects, but also in other cultural aspects like celebrating festivals, speaking a "hodge podge" (IP t) of English and their mother tongue and most important in the Indian food in Singapore. The population of Singapore adopted diverse eating habits as well as ingredients from the country's inhabitants from all over the world. In particular, Malay and Chinese ingredients influenced the Indian food in Singapore and participants called it "*Singapore-Indian*" food. This shows that the process of acculturation and in particular of dietary acculturation happened already on the part of the host country as well. However, the Indian culture is present in Singapore to a higher extent compared to Western countries, even if it experienced over the years a "mixing and matching" with other cultures present in Singapore. One aim of the present study was, to investigate if dietary modifications of first generation Indian migrants in Singapore differ from dietary modifications of a similar population living in Western countries where the Indian culture is present to a lower extent. Results indicate that the presence of Indian food and culture might be more relevant for participants from group 2 (The Settled) who stayed in the country for longer and who are provided with the time as well as with financial resources to explore the cultural offer. Furthermore, it was found to be easier for women of this group to maintain social contact to other Indians from the same ethnic background through the school of their children and their ability to afford living in condominiums. These are private houses, which are not subjected to the "Ethnic Integration Policy of the Housing and Development Board (HDB)", wherein a representative quota of homes in a housing block is requested for each of the three ethnic groups. Hence, in condominiums often the predominant part of residents belongs to one race or even to a specific ethnic group. This allows participants to mingle with Indians from the same ethnic group, celebrate Indian festivals together, prepare festival food and exchange recipes as well as information on healthy nutrition. These women often termed Singapore with attributes like "*a home away from home*" or "*just another suburb of India*". They were able to practice their traditions and enjoyed an intense contact to their families back home in India, but at the same time enjoyed their freedom afforded by distance from the joint family, in order to organise their life independently at least to a certain extent.

On the contrary, participants of group 1 (The Unsettled), who had a shorter length of stay in the country, found neither the time, nor did most of them have the financial resources to explore the Indian culture in Singapore. They were still busy with settling in Singapore and due to the short time, since they left home they were longing for the “authentic” Indian culture concerning religion, festivals and food. Some complained about the commercial temples in Singapore or about the limited celebration of Indian festivals. Participants regretted that this so called “*Singapore-Indian*” cuisine does not include the taste of the authentic Indian dishes and that they “*rarely eat good food*” in Singapore. This indicates that the migrants’ well-being of this group is not simply assured due to their access to nutritionally sufficient, but also to culturally adequate diets. This might be one explanation for the fact that some findings in this study were similar to dietary modifications of Indian migrants in US, Canada or Newfoundland. Migrants with a shorter length of stay in Singapore still suffered from nostalgia for their mothers’ homemade food or the original “Indian taste”. They did not accept the Singapore-Indian dishes to be Indian food. Hence, they found similar pre-conditions concerning the supply of Indian food as newly arrived Indian migrants in Western countries.

In summary to this aspect, it can be assumed that the presence of Indian culture in Singapore has an influence to the migrants’ dietary acculturation as well as to their overall acculturation, depending on the length of stay in the country as well as on their time and financial resources. In this context, it would be interesting for further studies to investigate the eating behaviour and acculturation of married women with a shorter length of stay but with the same time and financial resources.

Sixth: Diverse studies about dietary acculturation of Indian migrants were conducted with Indians from other geographical areas of the country (MAHADEVAN 2003; RAJ, GANGANNA AND BOWERING 1999). Findings were in some aspects similar to the ones in this study, which focused on South Indian migrants. This indicates that affiliation to different ethnic Indian groups (assuming the same religion) might not affect the dietary modifications. However, more studies are necessary to confirm these findings.

Recommendations

Findings of this research suggested negative as well as positive dietary modifications. Considering the prevalence of Indian migrants for diet-related disease, which was identified in diverse studies, both, the identified positives as

well as the negative dietary modifications provide information for health consultants to compile suitable counselling services for Indian migrants. Findings also indicated that all participants came along with their personal attitudes, food taboos and eating traditions. Hence, health care professionals need to consider that any nutritional advice for Indian migrants should be individualized. It is important for professionals to evaluate the migrants' traditional health beliefs, as well as socioeconomic and environmental factors related to their personal diet, in order to determine individualistic advice.

Singaporean health professionals can use this information to plan nutrition education programs for Indian migrants so that they can make informed decisions in adapting to new eating patterns and to make wise food choices in their new environment. It is important to help Indian migrants retain healthy food habits from their home country and to encourage them to choose eating patterns of the host country that are nutritionally sound.

The Health Promotion Board in Singapore has conducted several campaigns and programs during the last years to support Singaporeans with consuming a healthier diet (please refer to chapter II 6.4 for further information). Participants rarely knew about these programs. Furthermore especially participants who ate in food courts or hawker centres for lunch, expressed their mistrust in NIF, specifically vegetarian NIF. Likewise the "food trails" offered by the HPB Singapore, guided tours in food courts and hawker centres, but also in local supermarkets would help newly arrived Indian migrants to learn about the range of NIF, as well as healthy and purely vegetarian choices. This might avoid the high consumption of fast food, which participants practiced during their initial phase in Singapore and might provide them with more confidence in their daily food choices.

Another option to support the migrants' healthy nutrition might be providing an information brochure, translated in common Indian languages. This brochure could be handed out during the registration at the Ministry of Manpower, which every new migrant has to proceed in Singapore.

More than half of the participants were employed in a company that provides dinner for employees who do overtime. These dinners were dominated by fast food. Nutritional education might help companies provide a balanced dinner for their employees that caters to the taste of different ethnic groups and may help new arrived migrants to learn about the eating culture in Singapore.

Limitations

Although findings of this study contribute new knowledge to the existing literature, there are diverse limitations that need to be addressed.

One of the main limitations is the generalizability of the findings, which is limited due to the small sample size and the fact that the study included a population of predominantly highly educated participants. The sample in this study does not represent less skilled Indian migrants. Their dietary behaviour is likely to be different from this of highly educated migrants. Therefore, this study might not be generalizable to Indian migrants of other social classes in Singapore. However, this study helps to understand the dietary acculturation and its related affecting factors as well as the overall acculturation status for first generation highly educated Indian migrants in Singapore.

Participants were overall not fully comfortable with completing the EAAM. Mainly the question “Indians should not date non-Indians” was uncomfortable especially for unmarried women and men with a shorter length of stay in Singapore. Although the questionnaire was discussed in the pre-tests with two single participants, who confirmed the suitability of the questionnaire for Indian migrants, further studies should consider using an acculturation measure that is more culturally sensitive.

Sampling bias is another potential limitation of this study. Participants of the present study were mainly found to be colleagues of the researcher’s husband or friends of her yoga teacher. Therefore, two major groups dominated the sample: married women, who work part-time living together with their families and men, who work full-time living together with Indian flat mates. Single women, who work full-time and live together with flat mates, married women and men who work full-time and live with their families, form only a minor part of the entire sample. Future studies should consider including participants with similar socio-demographic characteristics with the same sample size in order to allow more comparability of the results.

Furthermore, the research is limited to the participants’ statements. There may be a discrepancy between what participants narrated and what they really practiced. Although unclear statements and information were clarified with the participants on the phone or within a second meeting, the researcher had to depend on the participants’ data. Participant observation in various settings provides a suitable solution to this problem. However, limitations of time and further resources forced the researcher to rely on interviews. Continuing studies

should include participant observation during grocery shopping and meal preparation in order to verify the participants' self-report.

Outlook for future research

The present research underscores the need for the Singapore government and organisations to obtain comprehensive information on dietary acculturation of Indian migrants. Findings indicate a need for multidimensional studies of dietary acculturation and suggest that more investigation is needed to determine the most effective ways to evolve prevention programs for diet related disease of migrants.

Further research on the dietary acculturation of first generation Indian migrants in Singapore should include less skilled participants as well, to identify significant dietary modifications and affecting factors within this group. Based on the findings of this present research, a food frequency questionnaire can be generated as well as a quantitative questionnaire about the overall eating behaviour. In addition to the use of a more adjusted acculturation scale, this would allow an overall quantitative approach in order to include a representative sample. However, by investigating dietary acculturation of a migrant population, equal with a quantitative or qualitative method, it is important to conduct a holistic approach. This is an important issue for future research. It means, not only observing and examining the dietary modifications, but also the whole situation of the migrants including cultural changes, psychological condition and overall wellbeing in the host country. Only a holistic view allows researchers to understand the migrants' dietary modifications and to conduct purposeful further research or measures.

This research suggested a significant influence of housing situation and working hours to the migrants eating behaviour. Future studies should consider including participants sharing similar working hours and housing conditions for males and females in the same proportions to make sure findings are comparable.

Two significant interrelations between eating behaviour and acculturation aspects were identified. One was the decrease of temple visits caused by the increased meat intake. The second one was the weight changes and problems to cope with the food supply in Singapore in relation to acculturative stress. These findings provide significant information for health professionals by considering the migrants' overall wellbeing and cultural integration. It is therefore important to elaborate and investigate this issue in more detail.

Previous studies on the health status of Indian migrants in diverse countries identified a higher prevalence of Type 2 Diabetes for Indian migrants compared to other ethnic groups (ABATE AND CHANDALIA 2007; THE DECODE-DECODA STUDY GROUP 2003; HOLMBOE-OTTESEN AND WANDEL 2012; VENKATARAMAN ET AL. 2004). Also, within the Singapore National Health Survey 2004 Indians were identified to be the ethnic group with the highest prevalence of Diabetes among the ethnic groups (15.3% compared to 11.0% in Malays and 7.1% in Chinese) (MINISTRY OF HEALTH SINGAPORE 2004). ZHENG ET AL. (2012) found a higher prevalence of Diabetes and Diabetes related complications for second generation Indians in Singapore compared to first generation immigrants. Furthermore, they identified a higher prevalence for Diabetes in relation to the length of living in Singapore (ZHENG ET AL. 2012). It is well known that diet is important in the control of Type 2 Diabetes (IRZ, SHANKAR AND SRINIVASAN 2003). This would suggest that migrants with a longer length of stay in Singapore might change their diet in a negative direction and forward negative eating habits to their children who form the second generation. In the present study findings lead to the conclusion, that participants with a shorter length of stay in Singapore, as well as children of participants, show a higher tendency towards a diet, which might result in diet-related disease. In contrary, migrants with a longer length of stay in the country were found to be more health conscious. Children are at risk for diet-related disease due to their higher exposure to the local food, like fast food, sweet drinks, pizzas or oily snacks. Mothers also mentioned that their children eat much more of *“all these Western food”*. Although all mothers were found to be health conscious and were concerned about their children's diet, further studies on the eating behaviour of Indian migrants should also focus on the children's diet in order to identify negative modifications.

VII SUMMARY

Indian migrants form the second largest diaspora worldwide. With an intensive relation between food and culture and an increased prevalence for diet-related disease, examining and understanding the process of dietary acculturation of this migrant population is of high importance. A few studies have investigated the eating behaviour of Indian migrants especially in US but also in Europe. Until now, no research on dietary acculturation of first generation Indian migrants in Singapore has been conducted.

The purpose of this study was to explore the process of dietary acculturation for first generation Indian migrants in Singapore. Affecting factors on the migrants' eating habits as well as the context between dietary modifications and further acculturation aspects were investigated. In order to understand the process and receive comprehensive information, a qualitative approach was used. This approach examined not only the eating behaviour of the sample but also changes in their cultural and social daily life in order to identify influences on the migrants' diet. A review of literature on Indian and Singaporean culture and the eating habits as well as on previous studies on that topic was presented and incorporated in the understanding of the experience of the participants.

Twenty-four in-depth interviews were conducted to collect the data for this study. In order to verify the interview data and gather additional data on the acculturation process, a 24-hour dietary recall and an acculturation scale were included in the data collection process. Socio-demographic data were requested with a focus on their possible influence on the dietary acculturation. Data were analysed based on the approach of STRAUSS AND CORBIN (1990). Findings were presented in two steps. The first step presented results of the used instruments. In a second part, these findings were related to the research questions.

The findings of this study indicate that first generation Indian migrants in Singapore prefer to eat traditional Indian food for several reasons, namely taste, trust, health, nostalgia and to preserve their cultural identity. This traditional Indian diet was modified to different extents depending on diverse influences.

For younger migrants (20 to 31 years) with a shorter length of stay in Singapore (≤ 4 years), who lived together with flat mates and worked full-time, dietary acculturation could be manifested in breakfast modifications towards a Western style breakfast, an increased intake of non-Indian food and a higher frequency in eating outside the home. Some participants of this group identified an increased intake of meat and fast food. Availability, taste, trust, nostalgia and

mainly spare time due to working hours and changes in their household composition influenced dietary modifications of this group. Weight changes were common among this group, attended by an overall discontent with their eating situation. They appeared to be unsettled in their overall living situation. Interestingly, some modifications in their diet as well as concerning further acculturation aspects in this group were conform to the findings of studies about Indian migrants in the US and Europe. This leads to the conclusion, that the presence of the Indian culture and the supply of Indian food in Singapore had a minor impact on the acculturation process of Indian migrants in this group.

Women between 36 and 47 years, with a longer length of stay (≥ 7 years) in Singapore who lived together with their families and worked part-time or were housewives were found to act as preservers of the Indian traditions and eating habits. At the same time, they were open for modifications towards a Western diet. For convenience, health and due to their children's influence they changed breakfast towards Western style items. Lunch and dinner included mostly Indian foods. Motivated by their children they started to cook non-Indian food in form of Italian, Mexican or Western dishes occasionally. Health consciousness was high among these women. Children, health and the aim to preserve their cultural identity appeared to be major concerns among these participants. The women were found to be content with their eating situation in Singapore and at the same time, they appeared to be settled in the country. Compared to younger, full-time working migrants, these women appreciate the presence of Indian culture in Singapore and the availability of Indian groceries. However, it has to be considered that these women have a longer length of stay in Singapore and furthermore they hold on higher time as well as financial resources.

Finding out that the Indian men started to cook in Singapore and mothers in India influencing their children's eating behaviour in Singapore presented interesting results. Based on the traditional gender roles in Indian households, cooking is untypical for men. The fact that Indian men in this study started to cook in order to eat at least one authentic Indian meal per day, symbolized the high significance of Indian food for this men. The influence from mothers in faraway India to the eating behaviour of participants, confirmed the high respect which elderly family members experience in a collectivistic society and which goes beyond the borders.

More than half of the participants ($n=14$) practiced diverse healthy modifications in their diet since they live in Singapore. This might be attributed to the comprehensive health communication in Singapore as well as to the fact that

living away from the influencing joint family allowed especially married women to practice these modifications.

The, in previous studies, often described “Health immigrant effect” could not be proven in this study. Instead, findings lead to the conclusion, that participants with a shorter length of stay in Singapore, as well as children of participants show a higher tendency towards a diet, which might result in diet-related disease, compared to first generation Indian migrants with a longer length of stay in the country.

Interrelations were identified between increased meat intake and a decrease in temple visits as well as between weight changes and the migrants overall wellbeing. These findings reflect the interaction between dietary acculturation and further acculturation aspect.

All Indian migrants were able to maintain their traditional diet to certain extent, while incorporating foods and eating habits from their host country. These findings are conforming to the bidimensional model of acculturation.

Beside socioeconomic factors, cultural, psychological and environmental influences affected the migrants eating behaviour. This should be considered in health promotion programs and counselling for Indian migrants.

Further studies are necessary to examine the transition between the eating behaviour of first and second generation Indian migrants in order to identify evidence of a relationship between the migrants diet and related disease. These studies should include less skilled migrants as well as the children of first generation Indians. Although the present study provides the basis for a quantitative research, this should include diverse instruments to examine the eating behaviour as well as the overall acculturation of migrants in order to receive a comprehensive understanding of their dietary acculturation.

VIII ZUSAMMENFASSUNG

Indische Migranten bilden weltweit die zweitgrößte Diaspora. Die intensive Beziehung zwischen der Ernährung und Kultur in dieser Bevölkerungsgruppe und die wachsende Verbreitung ernährungsbedingter Erkrankungen, erfordern ein umfangreicheres Verständnis über das Ernährungsverhalten und damit die Erforschung der Ernährungsakkulturation indischer Migranten. Nur wenige Studien in den USA und in Europa, haben das Ernährungsverhalten indischer Migranten untersucht. Bisher wurde keine Untersuchung über die Ernährungsakkulturation indischer Migranten der ersten Generation in Singapur durchgeführt.

Das Ziel der vorliegenden Studie war die Erforschung des Prozesses der Ernährungsakkulturation indischer Migranten in Singapur. Beeinflussende Faktoren auf das Ernährungsverhalten wurden ebenso untersucht, wie der Zusammenhang zwischen Veränderungen innerhalb der Ernährung zu weiteren Aspekten der Akkulturation. Ein qualitativer Ansatz wurde gewählt, um den Prozess zu verstehen und umfassende Informationen zu erlangen. Diese Studie untersuchte nicht nur das Ernährungsverhalten der Teilnehmer, sondern auch Veränderungen innerhalb ihres kulturellen und sozialen Alltagslebens, um mögliche Einflüsse auf die Ernährung der Migranten zu identifizieren. Die Ergebnisse der Literaturanalyse über die Kultur und das Ernährungsverhalten in Indien und Singapur, ebenso wie über vorhergehende Studien zu diesem Thema wurden dargelegt. Sie ermöglichten ein profunderes Verständnis über die Akkulturation, und im Speziellen über die Ernährungsakkulturation, der Teilnehmer.

In dieser Studie wurden vierundzwanzig intensive Interviews zur Erfassung der Daten durchgeführt. Zur Verifizierung der Ergebnisse und um zusätzliche Daten über den Akkulturationsprozess zu erhalten, wurde ein 24-Stunden Ernährungsprotokoll und ein Fragebogen zur Akkulturation integriert. Bei der Auswahl soziodemographischer Daten lag der Schwerpunkt auf deren potentielltem Einfluss auf die Ernährungsakkulturation. Die Datenanalyse basierte auf dem Ansatz von STRAUSS AND CORBIN (1990). Die Ergebnispräsentation erfolgt in zwei Teilen. Dabei berücksichtigt der erste Teil die Ergebnisse basierend auf den Daten der verwendeten Instrumente. In einem zweiten Schritt werden diese Ergebnisse auf die Forschungsfragen bezogen.

Die Ergebnisse zeigen, dass indische Migranten der ersten Generation in Singapur traditionelle indische Kost bevorzugen. Dies geschieht aus unterschiedlichen Gründen, wie Geschmack, Vertrauen, Gesundheit, Heimweh

und zur Erhaltung der kulturellen Identität. Die traditionelle indische Ernährung wurde in unterschiedlichem Ausmaß und aufgrund verschiedener Einflüsse modifiziert.

Für jüngere Migranten mit einer kürzeren Aufenthaltsdauer in Singapur, die mit ihren Mitbewohnern zusammenlebten und einer Vollzeitbeschäftigung nachgingen, konnte eine Ernährungsakkulturation festgestellt werden. Diese zeigte sich in der Veränderung ihrer Frühstücksgewohnheiten zugunsten eines westlich-orientierten Frühstücks, durch einen erhöhten Verzehr an nicht-indischem Essen und einer gestiegenen Anzahl von Außerhausmahlzeiten. Einige Teilnehmer aus dieser Gruppe wiesen auch einen gestiegenen Verzehr von Fleisch und Fast Food auf. Verfügbarkeit, Geschmack, Vertrauen, Heimweh, Zeitmangel aufgrund längerer Arbeitszeiten und Veränderungen im Haushaltstypus beeinflussten das Ernährungsverhalten dieser Gruppe. Einige dieser Migranten berichteten über Gewichtsveränderungen, zudem waren diese Teilnehmer insgesamt unzufrieden mit ihrer Ernährungssituation. Sie schienen sich noch nicht vollständig in Singapur eingelebt zu haben. Interessanterweise stimmten sowohl einige Ernährungsveränderungen als auch andere Akkulturationsaspekte in dieser Gruppe mit Veränderungen überein, die in Studien über indische Migranten in den USA und in Europa festgestellt wurden. Dies lässt den Rückschluss zu, dass die Präsenz der indischen Kultur und das Angebot indischen Essens in Singapur nur einen geringen Einfluss auf den Akkulturationsprozess der Migranten aus dieser Gruppe ausübte.

Frauen mit einer längeren Aufenthaltsdauer in Singapur, die mit ihren Familien zusammenlebten und in Teilzeit arbeiteten oder Hausfrauen waren, übernahmen die Rolle als Bewahrer der indischen Traditionen und Ernährungsgewohnheiten. Gleichzeitig gaben sie sich offen für Veränderungen zugunsten einer westlichen Ernährung. Sie veränderten ihre Frühstücksgewohnheiten zugunsten westlicher Frühstückszutaten. Ihr Mittagessen und Abendessen bestanden meist aus indischen Zutaten. Motiviert durch ihre Kinder begannen diese Frauen italienische, mexikanische oder westliche Mahlzeiten zuzubereiten. Sie zeigten ein ausgeprägtes Gesundheitsbewusstsein. Ihre Kinder, Gesundheit und das Ziel die indische Identität zu bewahren, bildeten signifikante Einflüsse auf die Ernährungsveränderungen dieser Frauen. Die Frauen waren zufrieden mit ihrer Ernährungssituation in Singapur und hatten sich gleichzeitig gut in dem Land eingelebt. Im Gegensatz zu der Gruppe jüngerer, vollzeitarbeitender Migranten, schätzten diese Frauen das hohe Maß indischer Kultur in Singapur und die Verfügbarkeit aller indischen Lebensmittel. Dabei muss jedoch berücksichtigt

werden, dass die Frauen bereits länger in Singapur leben und zudem über größere zeitliche als auch finanzielle Ressourcen verfügen.

Interessante Ergebnisse waren sowohl die Feststellung, dass indische Männer in Singapur begannen zu kochen, als auch, dass die Mütter im entfernten Indien noch immer einen starken Einfluss auf die Ernährung ihrer Kinder in Singapur ausübten. Aufgrund der bestehenden traditionellen Geschlechterrollen in indischen Haushalten, ist Kochen für indische Männer eher untypisch. Die Tatsache, dass indische Männer in dieser Studie kochten, um wenigstens eine authentische indische Mahlzeit pro Tag zu genießen, symbolisiert den hohen Stellenwert des indischen Essens für diese Männer. Der Einfluss der Mütter aus dem fernen Indien auf das Ernährungsverhalten der Teilnehmer bestätigt die große Achtung, die älteren Familienmitgliedern in einer kollektiven Gesellschaft entgegengebracht wird und die weit über die Grenzen hinaus bestehen bleibt.

Mehr als die Hälfte der Teilnehmer (n=14) führten verschiedene positive Veränderungen in ihrer Ernährung durch, seitdem sie in Singapur lebten. Dies kann zum einen auf die umfangreiche Gesundheitskommunikation in Singapur zurückgeführt werden. Zum anderen erbrachte besonders für verheiratete Frauen ein Leben fern der beeinflussenden Großfamilie in Indien, die benötigte Freiheit, solche Veränderungen durchzuführen.

Der in früheren Studien beschriebene "Health immigrant effect" konnte in der vorliegenden Studie nicht bestätigt werden. Stattdessen lassen die Ergebnisse den Rückschluss zu, dass Teilnehmer der ersten Generation mit einer kürzeren Aufenthaltsdauer im Land sowie auch die Kinder der Teilnehmer (zweite Generation), eher zu einer Ernährung tendieren, die in ernährungsbedingten Erkrankungen resultieren könnte, als die Ernährung der Teilnehmer in der ersten Generation mit einer längeren Aufenthaltsdauer in Singapur.

Wechselbeziehungen wurden identifiziert, zum einen zwischen dem gestiegenen Fleischverzehr und der verminderten Anzahl an Tempelbesuchen. Zum anderen zwischen Gewichtsveränderungen und dem Allgemeinbefinden der Migranten. Diese Ergebnisse spiegeln die wechselseitige Beeinflussung von Ernährungsakkulturation und anderen Aspekten der Akkulturation wieder.

Alle Migranten waren in der Lage ihre traditionellen Ernährungsgewohnheiten in unterschiedlichem Ausmaß beizubehalten. Gleichzeitig übernahmen sie Lebensmittel und Ernährungsgewohnheiten ihres Gastlandes. Diese Ergebnisse stimmen mit dem zweidimensionalen Modell der Akkulturation überein.

Neben soziodemographischen Faktoren wirkten kulturelle, psychologische und ökologische Einflüsse auf das Ernährungsverhalten der Migranten ein. Dies sollte in Gesundheitsprogrammen und bei Beratungen indischer Migranten berücksichtigt werden.

Weiterführende Studien sind nötig, um den Übergang des Ernährungsverhaltens von der ersten zur zweiten Generation indischer Migranten zu erforschen und Anhaltspunkte über einen Zusammenhang in der Ernährung der Migranten und damit verbundenen Erkrankungen zu identifizieren. Diese Studien sollten weniger gebildete Migranten sowie Kinder von Migranten der ersten Generation einschließen. Obwohl die vorliegende Studie die Basis für eine quantitative Studie erbringt, sollte eine solche verschiedene Instrumente beinhalten, um das Ernährungsverhalten und die allgemeine Akkulturation der Migranten zu untersuchen und somit umfassende Information über den Prozess der Ernährungsakkulturation dieser Migranten zu erhalten.

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A1. Information Letter

JUSTUS-LIEBIG-



FACULTY 09

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Dear ladies and gentlemen,

We would like to invite you to join a survey about food, identity and the acculturation process of Indians living in Singapore.

The requirements for attending this survey are as follows:

Age:	20 – 60 years
Home part of India:	South India
Religion:	Hindu
Length of stay in Singapore:	more than 1 year
Citizenship	Indian

This survey is conducting by Sandra Pahr-Hosbach, PhD student of the Institute of Nutritional Sciences at the Justus Liebig University Giessen, Germany, under supervision of Prof. Dr. Ingrid Ute Leonhäuser.

Dipl. oec troph. Sandra Pahr-Hosbach is a nutritionist from Germany living in Singapore since more than 3 years and researching the nutrition habits of Indians.

India is one of the fastest growing nations in the world and people from India are working all over the world. Within this thesis we want to get a deeper understanding of the relation between nutrition, ones identity and the acculturation process.

For the research, we are looking for participants to join an interview for approximately 60 minutes.

We guarantee that the interview is absolutely anonymous and the information will only be used for research reasons and not passed to someone else.

By participating the interview, you would help to make a great step forward in the nutrition research of Indians.

We would be more than happy to get your confirmation to attend the interview being conducted by Sandra Pahr-Hosbach:

Email: sandra-bernd@gmx.de

or via SMS / Call mobile phone: 96 72 24 64

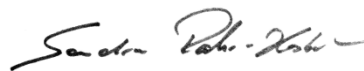
We would appreciate very much to get you as an interview partner.

Yours sincerely



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A2. Paper for introduction phase

Thanks for spending your time in this interview

Let me give you some information concerning my person and this interview

- Name, Uni, Topic
- Approx. 60 to 90 minutes
- Will be recorded for analysing reasons
- Absolutely anonymous
- Agreed with tape recording?
- 4 parts:
 - Start with **socio demographic data** on a fixed questionnaire
 - Followed by the **main interview which** is very open, I have an open questionnaire
 - In-between I would like to ask you to give me some detailed information about your **food intake of yesterday** on a paper
 - The final part is a fixed questionnaire about **acculturation** because we study the relation between diet and acculturation

If you do not understand a question, please feel free to ask me

Do you have any questions before we start with the interview itself and before I switch on the tape?

A3. Cover sheet

Name of participant:

Name of interviewer:

Date of Interview:

Place of interview:

Starting time of interview:

A4. Socio-demographic data questionnaire

1 Gender

- ☐ Male ☐ Female

2 Home country

Which State or union territory of India are you from? _____

3 Age

_____ Years

4 Marital status

- ☐ Married
- ☐ Single
- ☐ domestic partnership

5 Housing situation

- ☐ living together with spouse
- ☐ living alone
- ☐ living with friends
 - living together with Indian flat mates
 - living together with flat mates of different nationalities including Indian
 - living together with non - Indian flat mates

6 Living with children

- ☐ No
- ☐ Yes

If yes:

how many children? _____

how old is / are the children? _____

7 Since how long do you live in Singapore?

_____ year(s)

8 School Education (NOT including university)

_____ year(s)

9 What is your Educational Achievement?

10 What is your Profession?

11 How many hours do you work per day (average)? _____ hours

12 Which Religion do you belief in?

☐ Buddhist

☐ Christ

☐ Hindu

☐ Moslem

☐ Sikh

☐ Taoist

☐ Other, which religion _____

A5. 24-hour dietary recall

Please be as specific and honest as possible. Thank you.

breakfast						
Food / Drink item	Serving size	Time	Preparation method	IF	WF	OAF
lunch						
Food / Drink item	Serving size	Time	Preparation method	IF	WF	OAF
dinner						
Food / Drink item	Serving size	Time	Preparation method	IF	WF	OAF
snacks						
Food / Drink item	Serving size	Time	Preparation method	IF	WF	OAF

IF = Indian food

WF = Western food

OAF = other Asian food

A6. Interview guide

Part 2: Interview Guide			
<p><u>Dietary changes</u></p> <ul style="list-style-type: none"> o Changes? o Reasons for changes? (<i>Time /convenience, Price of food, Changes in daily routine,, Can't find all foods from India, Different taste of food, Food Quality</i>) o When did you make this changes? o Have you gained weight, since you are in Singapore? o Influence from the weather in Singapore to nutrition? 	<p><u>Grocery shopping</u></p> <ul style="list-style-type: none"> o Where do you preferred buy food? o Are you shopping in Indian grocery shops? o When buying food in a grocery shop in Singapore which aspects are important? (<i>Price, Freshness, Religious aspects, Nutritional value, Palatability/taste</i>) o Are all foods you are looking for available in Singapore? o If no, how do you substitute these products? 	<p><u>Dietary history</u></p> <ul style="list-style-type: none"> o Breakfast, lunch, dinner, snacks yesterday? o Was this a usual eating day? o Eating behaviour in India? (breakfast, lunch, dinner, snacks) o Vegetarian? o How often do you cook? o Which cuisine? o Where did you learn to cook? 	<p><u>Food & identity</u></p> <ul style="list-style-type: none"> o Traditional Person? o Traditions (food) at home? Food for festivals / celebrating festivals o Missing food from India? o Family sent you food from time to time? Which food items?? o What does food mean to you? o Preferred cuisine? o Feeling after 3 days without Indian food? o Food choice during travelling? o Open to try food from different cuisines? o Eating beef? Why not?
<p><u>Movement & Socialisation</u></p> <ul style="list-style-type: none"> o Why did you move to Singapore? o Feeling when leaving India, family, friends, colleagues? o How do you like Singapore? o Imagine to live in Singapore forever? o Housing composition changes (family members living together) 	<p><u>Ayurveda</u></p> <ul style="list-style-type: none"> o What do you know about Ayurveda o Influencing your diet? o Parents still practicing Ayurveda? o Diet advices from doctor? 	<p><u>Influence to eating behaviour</u></p> <ul style="list-style-type: none"> o People and circumstances influencing eating behaviour? (<i>Family, Religion, Doctor, Friends, Work/colleagues, Sports/Yoga, Traditions</i>) o Primary source for nutrition information? (<i>Friends, Relatives, TV, newspaper, magazines, books, doctor</i>) o Learning from other cultures concerning food, positive or negative points 	<p><u>Cast System & eating behaviour</u></p> <ul style="list-style-type: none"> o Belonging to a cast? o Influence to eating behaviour from cast?
<p>Food, identity and the acculturation process of Indian migrants in Singapore</p>			
<p><u>Religion</u></p> <ul style="list-style-type: none"> o How important is your religion to you? Going to a temple? o Influence from religion to diet? 	<p><u>Eating out</u></p> <ul style="list-style-type: none"> o Eating out in Singapore? o Eating out in India? o Reasons for eating out? (<i>Time saving, Taste of food, Meeting friends, Money saving</i>) o Where do you prefer to eat out? (<i>Indian Restaurant, Asian restaurant, Western (non Asian) Food, Fast Food Hawker centre (Which stalls?)</i>) o Eating more fast food than in India? o Why? 	<p><u>Healthy food</u></p> <ul style="list-style-type: none"> o What is from your point of view a healthy diet? o Indian cuisine concerning a healthy diet? o Which foods cause in your opinion chronic disease o Do you follow any health/diet guidelines? o Knowledge about food campaigns in Singapore? (e.g. healthier choice food campaign) o Cold & warm food for the body? 	

A7. East Asian Acculturation Measure (EAAM)

Please choose only one answer for each question

The questionnaire is absolutely anonymous and the information will only be used for
Research reasons and not passed to someone else.

1 I write better in English than in my native language

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| strongly
disagree | disagree | disagree
somewhat | agree
somewhat | agree | agree
strongly |

2 Most of the music I listen to is Indian

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| strongly
disagree | disagree | disagree
somewhat | agree
somewhat | agree | agree
strongly |

3 I tell jokes both in English and in my native language

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| strongly
disagree | disagree | disagree
somewhat | agree
somewhat | agree | agree
strongly |

4 Generally, I find it difficult to socialize with anybody, Indian or Singaporean

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| strongly
disagree | disagree | disagree
somewhat | agree
somewhat | agree | agree
strongly |

5 When I am in my apartment/house, I typically speak English

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

6 My closest friends are Indian

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

7 I think as well in English as I do in my native language

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

8 I sometimes feel that neither Singaporeans nor Indians like me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

9 If I were asked to write poetry, I would prefer to write it in English

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

10 I prefer going to social gatherings where most of the people are Indian

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

11 I have both Singaporean and Indian friends

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

12 There are times when I think no one understands me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

13 I get along better with Singaporeans than Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

14 I feel that Indians treat me as an equal more so than Singaporeans do

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

15 I feel that both Indians and Singaporeans value me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

16 I sometimes find it hard to communicate with people

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

17 I feel that Singaporeans understand me better than Indians do

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

18 I would prefer to go out on a date with an Indian than with a Singaporean

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

19 I feel very comfortable around both Singaporeans and Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

20 I sometimes find it hard to make friends

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

21 I find it easier to communicate my feelings to Singaporeans than to Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

22 I feel more relaxed when I am with an Indian than when I am with an Singaporean

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

23 Sometimes I feel that Indians and Singaporeans do not accept me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

24 I feel more comfortable socializing with Singaporeans than I do with Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

25 Indians should not date non- Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

26 Sometimes I find it hard to trust both Singaporeans and Indians

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

27 Most of my friends at work are Singaporeans

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

28 I find that both Indians and Singaporeans often have difficulty understanding me

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

29 I find that I do not feel comfortable when I am with other people

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
strongly disagree	disagree	disagree somewhat	agree somewhat	agree	agree strongly

A8. Observation guide

Special Characteristics of the interview situation

(Attendance of others than the interviewer and the participant; interview atmosphere before, in-between and after the interview, disruptions etc.)

Special Characteristics of the participants behaviour before in-between and after the interview

(Smoking; nervous; spontaneous; honest; concentrated, shy, cultural gap)

Ambience of the room

(place of interview, noise, atmosphere of the room, distraction due to the environment etc.)

Time frame of the interview

Other specific observations

A9. Transcribing rules

Step	How to do	comment
Font:	Arial 10 or Times New Roman 12	
Linefeed:	left	
Line pitch	Single spacing	
Page number	footer	
Break	Between I and IP talking	
Footer	Left: Name of interview; Right: page number	
Interviewer:	Shortcut I	
Interviewpartner:	Shortcut IP	
Punctuation	After I: and IP:	
Breaks	To be mentioned in brackets	
Inaudible	To be mentioned in brackets	Please mark also in red
Unsure transcription	To be mentioned in brackets	Please mark also in red
Loud voice	To be mentioned in brackets	
Quiet voice	To be mentioned in brackets	
accented	To be mentioned in brackets	
Break in a sentence or not finished sentence	Mark with ...	
Speaking at the same time	Mark sentence in blue which were spoken at same time	
Paralinguistic comments	To be mentioned in brackets	Write down every paralinguistic comment e.g. laughing, coughing, smiling also comments like mhh, ohh, ahhh etc.
shortcuts	If used from interview partner or interviewer shortcuts have to be written down like spoken	No use of shortcuts from transcribers
Numbers:	Write in numbers	
Breaks from outside	To be mentioned in brackets	
Others/ comments:	put it in Parenthesis and	mark in green

SOME MORE DETAILED DESCRIPTIONS:

DECLARATION

- Put one blank line in-between the sentence of I and IP

TRANSCRIBE WHAT YOU HEAR

- Don't "tidy up" grammar, or word order. On the whole you need to transcribe word for word, with every word in the exact order as spoken. It matters not about the rules of grammar and sentence structure as normally applied to the written language. These are transcripts, and they must aim to reflect the words as they were spoken.
The transcription needs to be done exactly word by word, no paraphrase.
- Keep contractions as they are, e.g. "it's" should not be written as "it is," or vice-versa.
- It might happen that the interview partner says a word that she/he didn't intend, but does not correct herself/himself. For example she/he may be talking about the right side, and, in the middle of it, says "left" instead of "right". You feel absolutely sure that they meant to say "right". Or.....do you..? The answer in such cases is: no matter how "sure" you are, write it as spoken. It is our opinion that it places too much of a burden on the transcribers to attempt to decide at this stage what the interview partner really meant or didn't mean. However if you have a strong feeling about it you should certainly let the editors know, and you can add your suggestion by putting it in Parenthesis in this way:
(Could the interview partner have meant "right"?)
- **Nonverbal communication, fillers, false and external sounds need to be included as well as mentioned in the table above.**
- **Write down all Indian words – do not translate**

USE BRACKETS FOR:

- aside remarks [sorry I have to open the door]
- intermittent from outside, e.g. voice, someone opening the door, phone ringing, 3rd is person talking etc. [IP is talking on the phone for 2 minutes]
- emotions from the interview partner and interviewer, e.g. laughing, smiling, coughing etc. [IP laughing loudly]
- breaks [IP thinking 1 minute]

- Put Inaudible or indistinguishable words in square brackets and mark them in red [INAUDIBLE]
- Use of Hindi, Marathi, or Sanskrit words unknown to the transcribers, or which they do not know how to spell. You could attempt a phonetic rendering in square brackets and mark it in red. e.g. [SOUNDS LIKE SALOO?] or if it's too unclear even for that, simply put [UNKNOWN INDIAN WORD].
- A word or phrase on which the transcribers have differing opinions and cannot agree. Simply indicate the two choices – [HANUMAN or HANDYMAN?] [SAHAJA or SUCH?] in square brackets and mark them in red

ENCLOSE DIRECT QUOTES

Example: She said 'I'm a vegetarian.'

COMMENTS

If you want to make an own comment please put it in Parenthesis and mark it in green

! IMPORTANT !

Every interview includes a break, where the interview partners have filled out a questionnaire. Mostly this break is in the middle of the interview. Please remark this break in red, bold, underlined in brackets and write down how long it took **[IP filling out questionnaire, 9.34 minutes]**

A10. Overview results Socio-demographic data

Name	duration interview	Gender		State of origin	Age	Marital status		Housing situation				Living with children		how many children	age of children	length of stay in Singapore	Education	Achievement	Profession	working hours per day	religion	
		m	f			Married	Single	living together with spouse	living alone	living with Indian flat mates	living with family	No	Yes								Christ	Hindu
IP a	01:16:41	x		Kerala	27		x			x		x				4	7-10	Master	Engineer	> 10		x
IP b	01:21:28	x		Karnataka	26		x			x		x				3-4	>10	Bachelor	SW - Engineer	> 10		x
IP c	00:49:29	x		Karnataka	28		x			x		x				2	>10	Bachelor	SW - Engineer	8-9		x
IP d	01:15:34		x	Kerala	31		x			x		x				3-4	>10	Master	Engineer	8-9		x
IP e	01:09:45	x		Karnataka	26		x			x		x				3	>10	Bachelor	Engineer	8-9		x
IP f	00:42:22		x	Karnataka	29	x		x				x				3-4	>10	Master	IT-Developer	<7		x
IP g	01:35:21	x		Andhra Pradesh	31	x				x		x (children living with spouse in India)				2	10	Master	Master of Science, [working as an engineer]	10		x
IP h	01:05:18	x		Tamil Nadu	20		x			x		x				3	16	Diploma in Mobile and Wireless Computing	IT	> 10		x

APPENDIX

Name	duration interview	Gender		State of origin	Age	Marital status		Housing situation				Living with children		how many children	age of children	length of stay in Singapore	Education	Achievement	Profession	working hours per day	religion	
		m	f			Married	Single	living together with spouse	living alone	living with Indian flat mates	living with family	No	Yes								Christ	Hindu
IP i	01:16:36	x		Tamil Nadu	27		x			x		x				2	>10	Bachelor	Engineer	> 10		x
IP j	00:42:05	x		Tamil Nadu	35	x		x					x	2	5; 1.5	3	12	Bachelor	Engineer	9		x
IP k	00:53:33		x	Mumbai	37	x		x					x	2	8; 5	11	12	Master	Housewife			x
IP l	01:27:20		x	Tamil Nadu	40	x		x					x	2	8; 10	11	12	Bachelor	Housewife			x
IP m	01:22:42		x	Tamil Nadu	47	x		x					x	2	17; 22	20	15	Bachelor	Writer	3 - 4		x
IP n	01:01:14	x		Karnataka	30	x		x					x	1	2 month	5	12	Master	SW - Engineer	9- 10		x
IP o	01:29:17		x	Karnataka	38	x		x					x	2	6; 10	15	12	Bachelor	designing company	4		x
IP p	01:32:10	x		Kerala	29	x		(x)				x				3	12	Bachelor	SW - Engineer	12		x

APPENDIX

Name	duration interview	Gender		State of origin	Age	Marital status		Housing situation				Living with children		how many children	age of children	length of stay in Singapore	Education	Achievement	Profession	working hours per day	religion	
		m	f			Married	Single	living together with spouse	living alone	living with Indian flat mates	living with family	No	Yes								Christ	Hindu
IP q	00:50:23		x	Tamil Nadu	40	x		x				x	2	11; 13	3.5	12	MBA	PhD student	6		x	
IP r	01:14:05		x	Tamil Nadu	43	x		x				x	2	6; 13	15	12	Master	SW - Engineer	4		x	
IP s	01:20:38		x	Tamil Nadu	45	x		x				x			7	12	Bachelor & MBA		5		x	
IP t	00:47:52		x	Tamil Nadu	36	x		x				x	2	11; 6	14	12	Master	Teacher	4		x	
IP u	01:16:12		x	Tamil Nadu	26		x			x		x			9	12	Bachelor	SW - Engineer	9 to 10		x	
IP v	00:42:32		x	Karnataka	27	x			x			x			2	14	Bachelor	SW - Engineer	8 to 9		x	
IP w	01:05:51		x	Tamil Nadu	31	x		x					x	1	4	7	12	Master	SW - Engineer	9		x
IP x	01:35:20		x	Tamil Nadu	27		x					x			3	13	Master	SW - Engineer	8		x	

A11. Life of IP g in a traditional Indian village

IP g grew up in a small village, close to the seashore, between Chennai and Bangalore. The village is 30km away from the next town where his grandfather used to travel to via boat on the canal. Only 50 families live in the village. His parents belong to same village and stayed there almost for their lifetime, except when they came to Singapore to visit him. That is only when they have a chance to see different cultures.

After his education, he left his village for work, while his wife and child stayed with his family in the village. He stayed three years in Hyderabad and after that further three years in Chennai. From there he travelled home once per month. But before they moved to Singapore he stayed together with his wife and child.

The caste system is very much alive in his village. About 2km away from their village there live converted Christians and IP explains that during his grandfather's time between the Hindus and Christians used to be a big fight between "these two casts". They have a washer man and a barber caste who stay 1 km away from village. People from that caste come daily to their house to work for them and they pay them annually. When people from the washer man caste and barber caste, came to his house for work and wanted to eat they cut a banana leaf in IP's garden and IP's family serve them food on the leaf, later they throw the leaf. In his village live only people from his caste and one or two other castes. He is belonging to the Chattier caste, which is the rulers' caste, but as there is no country to rule, they continue farming. There are numerous people from his caste in village, as farming needs many people. In addition, there live two families from the merchant caste for groceries, one or two Brahmin families who do temple rituals, one or two caste families for house construction and one or two for pantries. They know in 99% the caste of others, sometimes they call people in the village by their caste name as in his state one can recognize the caste by the last name.

Sometimes he forgot about the caste and the differences while he was living in town, as than he needed to stay with friends who belonged to other castes. Nevertheless, in his village they still maintain the caste life and nobody will think about the caste system there, as they all grew up in this culture, but he knows that the caste system and its rules sounds a bit odd for people who live in a big city.

He explained that lower caste people could eat in higher caste peoples house, but not opposite. If he visits a friend from a lower caste, he would not eat and touch the main food/cooked food there, only fruits or water. If lower caste people come to his house, they can eat everything.

A12. List of Codings included in the case analysis**General information about life in India**

- place of origin parents/family & social status
- relation to family
- relation to Indian culture
- relation religion IP
- relation religion parents/family
- meaning of festivals for IP
- which caste belonging to
- influence of caste to personal life
- arranged marriages
- caste influence to parents
- housing situation in India before moving to SGP
- social life in India

Eating habits in India

- religion and food, rituals
- caste and food
- food and identity
- importance of food for IP
- living without Indian food in other countries
- health factor of Indian food
- eating habits in India
- eating habits in general
- non-veg food
- festival food
- meat intake India\vegetarian
- breakfast_India
- breakfast_India\Indian
- lunch_India
- lunch_India\Indian food
- dinner_India
- dinner_India\Indian
- snacks_India
- drinks_India
- mothers role as cook in the family
- fast food frequency India
- eating out - places, cuisines_India

The relocation

- reasons for moving to SGP
- travelled or lived overseas before SGP
- feelings when leaving India

General information about life in Singapore

- situation during first weeks in SGP
- homesick / missing India & family
- opinion about SGP
- social life in SGP

- acculturation SGP IP & kids, husband IP
- home trips to India
- Indian culture in SGP
- visits to Little India
- IP festival celebrations in SGP
- Indian festivals in SGP
- temple / church visits in SGP
- opinion of temples in SGP

Eating habits in Singapore

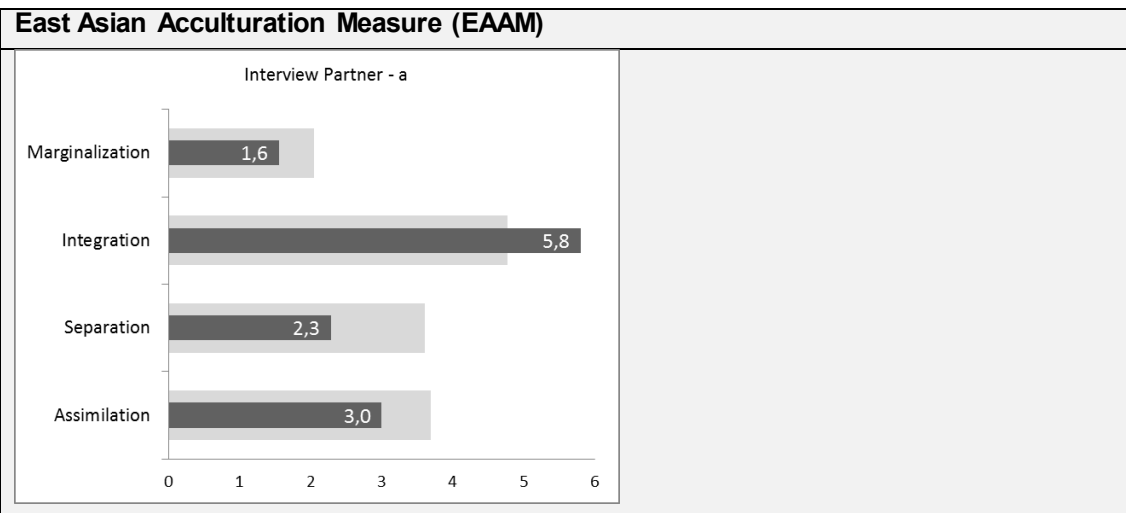
- diet acculturation
- diet change after moving to SGP
- reasons for diet change after moving to SGP
- Non-Indian food, open to try
- Non-Indian food, open to try\ taste of non-indian food
- Non-Indian food, open to try\ learning from other cuisines
- eating habits in SGP
- reasons for diet changes in other countries
- eating habits of the family
- health status parents/family
- persons with influence to IP'S nutrition
- media with big influence to nutrition
- food information from media
- which food missing
- family sending food from India
- family sending food from India\ bringing food from India - yes
- type of food family sending from India
- meat intake SGP\ vegetarian
- breakfast_SGP
- breakfast_SGP\ completely Indian breakfast
- breakfast_SGP\ completely non-Indian breakfast
- breakfast_SGP\ skip breakfast
- lunch_SGP
- lunch_SGP\ mostly Indian, sometimes non-Indian food
- dinner_SGP
- dinner_SGP\ Indian
- cooking habits
- type of home cooked food
- reasons for eating fast food in SGP
- fast food - frequency SGP
- eating out - places, cuisines_SGP
- home remedies
- favourite food/cuisine
- important shopping factors
- shopping places for food
- shopping frequency
- weight changes since moving to SGP/other country
- Indian food in SGP
- availability of Indian food in SGP
- availability of vegetarian food in SGP
- healthy food for IP

A13. Interview a

“I am definitely not a foody. I am just happy with whatever it is around and if it is good enough for example over average or average I am happy with it no matter what.” (IP a, line 92)

Table A13: Characteristics of IP a (source: author’s own)

Socio-demographic data	
State of origin	Kerala
Gender	male
Age	27
Marital status	single
Housing situation	living with Indian flat mates
Years living in Singapore	4
Employment	Engineer, fulltime
Dietary Changes, Affecting Factors, Acculturation Aspects as keywords	
Dietary Changes	<ul style="list-style-type: none"> • more non-veg food in Singapore • more beer • skips breakfast • eats out more often • more fast food • more spinach
Affecting Factors	<ul style="list-style-type: none"> • variety: less for veggie food • taste: bad for veggie food • availability: beer, papaya, spinach easy available • more money • taste: likes spinach, does not like Chinese vegetables • friends: cook non-Indian-food for him • working late: eating fast food • attitude: every cuisine has healthy and unhealthy food • health knowledge: body needs protein, papaya and spinach are healthy • habit: not eating due to boredom • preferences: rice and spicy food are important
Acculturation Aspects	<ul style="list-style-type: none"> • SGP: boring, safe, clean, nice place • will move back to India when parents need him, or earlier • not going to temples in Singapore, they are too commercialized • celebrating festivals to lesser extent
24-hour dietary recall – not filled out.	



General information about his life in India

He grew up in a village in Kerala. Since the age of 14, he has lived away from his family for education. His parents always gave him the choice of deciding things on his own. He added: *“If they tell ‘you can’t do it’, it doesn’t mean that I wouldn’t do it.”* They are open and not very traditional. IP a enjoyed talking about the Onam festival when the whole family got together and as kids, he and his sister used to “do” big flowers for Onam.

His parents do not care about the caste of his friends, except when the topic comes to marriage. He explained: *“It’s not two people; it’s two families getting married.”* The family belongs to the Nayaer caste, which exists only in Kerala. It is a middle caste. He was very serious when talking about caste and he complained that his caste does not get as much benefits and advantages as people from the lower caste. He stated there is a relationship between caste and diet, in particular food traditions at weddings are dependent on caste.

Eating habits in India

At home his mother was responsible for the cooking. When he is in his hometown for visits, he always eats with his family or with other family members as all their neighbours in his hometown are relatives. His mother is the only person who in the family to who cooks. Twice per week he ate non - veg food. In India, they get more variety, more choice of vegetarian food. While he lived with his friends he ate out every day, but there was no fast food in India like McDonald’s or KFC.

His parents do not eat beef and his mother never ate eggs. *“I eat beef and my parents not. They are Hindu I mean my mother and father they are both Hindu. But I don’t care, like it’s my life right?”* Drinking in pubs was very expensive in

India and he had less money to go out. Hence, he used to meet with his friends at home. They ordered food, sang and watched movies. He did not know which caste his friends belonged to and they ate all together, unaffected by their castes.

The relocation

He moved to Singapore to get international work experience. His family encouraged him to work in Singapore. About moving, he said: *"It's never easy leaving home, but once you are out you are out."* Even nowadays, he still has butterflies in his tummy when he leaves his home after a visit.

General information about his life in Singapore

He mostly travels home twice a year. About Singapore, he thinks that it is a bit boring, because he sees the same things and does same things all the time. Contrariwise he explained it is a nice place, very safe, very clean, perfect in some things, but *"home is home"* and if his parents would need his help he would return *"or maybe earlier"*.

Temples in Singapore seem to be commercial and are like tourist attractions for him, so he never visited a temple in Singapore. While in India temples are very quiet, and it is like *"(...) in a different world ... very, very nice"*. [smiling happy] Whenever he goes home to India, he visits a temple.

Eating habits in Singapore

He is **eating more non-veg food in Singapore** as they do not have as much variety of veggie food in Singapore. Furthermore, the Singapore vegetarian food does not appeal to him. While in Singapore, he finds non-vegetarian food is tastier. In addition, the so-called vegetarian food in Singapore often contains small fish [ikan tamban] and is therefore not pure vegetarian. Sometimes he feels that he had too much non-veg food, than he eats vegetarian food for three weeks and goes back to his routine after that.

He **drinks more beer in Singapore** because buying beer in Singapore is *"as easy as buying water."* In addition, his **frequency of eating spinach increased**, because this is the only vegetable he likes in Singapore. He is **eating out more often** and explained this might be because in Singapore his friends are *"all over the places"* and because he has a bit more money in Singapore. However, he added that he would not go out in India that often even with more money.

He does not eat breakfast. For **lunch** and **dinner** he goes to a food court near the office. On weekends, he mostly goes to Subway. When he stays until late in

office, they order fast food from KFC or McDonald's. He is not very interested in cooking and ranks his cooking skills as bad or average. In addition, he does not like cooking, as he has to wash the dishes later. Currently he lives together with one friend who likes to cook Thai food and pizza Western style, so he eats this kind of food with her. On the internet he learnt that spinach is the best vegetable and papaya is best fruit he can eat and he adds that both are very cheap and available everywhere. A pragmatic approach determines his grocery shopping which he does at Mustafa for Indian spices and in Cold Storage for general foods and vegetables. But he is not doing much grocery shopping as he cooks only around once in three months.

Spinach is IP's favourite food and he has cravings e.g. for pizza or fries, but said in general not to be very particular on special foods: *"I wouldn't go to East Coast because there is a (...) restaurant from my hometown."* Thai food, but Pasta, Fries, Burger King food or Nasi Goreng are pleasing him. The only thing he does not like is Chinese vegetables: *"I can eat it I don't hate it, but ah I would not love it."* Singapore is for him a good place to get authentic tasting foods from all over the world. When travelling to India, he enjoys all the foods his mother cooks for him, but does not ask for to prepare special dishes. The family never sent him food, as he was always fine with the food around, even if not all Indian foods are available in Singapore. Normally he gets used to the food wherever he is as long as the food is spicy and he can eat rice at least once per week. However, when he stayed in Germany for 6 months he started to cook Indian food from time to time, because rice and spicy food were hard to get. He gained a lot of weight there because he consumed a lot of cheese and beer.

To him Indian food is not necessarily healthy food as there is a lot of fried stuff and *"oil gives a lot of cholesterol."* Non-vegetarian food is especially unhealthy. Healthy food for him would be to eat more vegetables, like spinach and less meat, but at least some eggs because *"we need proteins."* He comments *"...in every cuisine there is a healthy food and a non-healthy food"*. Health is an ambivalent topic for him. IP a would not eat food because it is healthier, but because he likes the taste. On the contrary, he stated: *"Ah of course health is important, health is wealth, health is everything yeah."* He eats out every day, mostly in food courts. Together with a friend, he visits an Indian restaurant in Little India where they also cook the food from his hometown. They go there, at a minimum, twice a month: *"(...) the people who are managing it, ahm ... make you feel like ahm ... your are at home."* Also for Onam, he went to this restaurant to eat an authentic tasting feast. He does not travel home for festivals. In Singapore, mainly Tamil and North Indian festivals are celebrated rather than the festivals from his state.

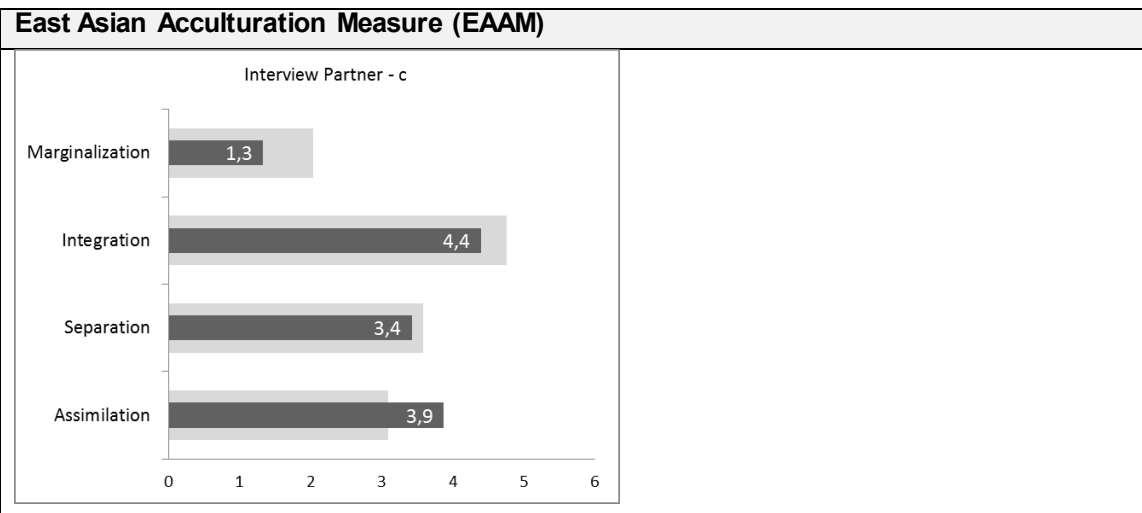
Life situation September 2013: IP a got married and lives with his wife and his baby in Singapore.

A14. Interview c

“I am really a foody” (IP c, line 361)

Table A14: Characteristics of IP c (source: author's own)

Socio-demographic data						
State of origin	Karnataka					
Gender	male					
Age	28					
Marital status	single					
Housing situation	living with Indian flat mates					
Years living in Singapore	2					
Employment	Software-Engineer					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">eats more healthy foodmore often NIF for breakfastuses less oil for cookingeats more saladseats less rice, more fresh vegetables and fruits instead of ricetried chicken out of curiosityeats out more					
Affecting Factors	<ul style="list-style-type: none">mother: learnt him cooking and gives him recipesfriendscaste: vegetarianhealthavailability: limited for veg foodattitude: likes to try towards NIFtaste: Mexican is his favourite cuisineconveniencepersonalitytemptationlaziness					
Acculturation Aspects	<ul style="list-style-type: none">likes Singaporecannot imagine to stay forever, already has plans in Indianot going to temple, did not go in India as wellcooks with friends and does puja on festivals					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	bread toast	10.00 am	toasting		x	
	coffee	10.00 am	home	x		
Lunch	rice, yoghurt	2.30 pm	boil	x		
Dinner	pasta	10.00 pm	home		x	
Snacks	apple	5.30 pm	outside			



General information about his life in India

He stayed 26 years with his parents until he moved to Singapore. His parents never imposed anything to him, also they never forced him to go to the temple, and he did not visit temples in India very often. His mother is very devoted, other than that, his family is not very traditional.

Eating habits in India

He belongs to the Brahmin caste, which is supposed to eat vegetarian food. His parents brought him up as a strict vegetarian and while staying with them he never tried to eat meat, as it was never cooked at his home. Later he realised that he had chances of eating meat, so he tried it out of curiosity.

His mother is the main cook at home; his father does not know how to cook. In India, he ate more rice, mainly with curries.

His typical Indian **breakfast** included dosa, idlis and roti. Occasionally he ate toasted bread and always drank coffee. For **lunch** he ate in the canteen after he started working, but after a while he felt that the food is too oily and unhealthy there, than he took lunch from home mostly. He ate mostly biscuit as **snacks** and drank two cups of coffee per day. They often used to have vegetarian pizzas on weekends, which he termed as fast food.

The relocation

He stayed 26 years of his life with his parents, while his colleagues in Bangalore came from different parts of India and they were all living by themselves. Also his childhood and school friends were migrated all over the world. Therefore, he also wanted to experience to live by himself.

Furthermore, he wanted to work in a country with better conditions. India became too crowded with too much traffic and he wanted to give himself a break from this.

General information about his life in Singapore

In Singapore, he feels he gets a better exposure to different cultures, different work styles and different life style. Singapore was a good solution, because it is just four hours from home and it was easy to get a visa. It was not too hard to leave the country and his family, as it was something he wanted to do for long time. Furthermore, some of his friends were already living in Singapore.

He is travelling home twice a year. About Singapore, he said *“I really like the place”*. But he cannot imagine to stay in Singapore forever as he already has some plans back in India. Most of his close friends in Singapore are Indian.

He does not go to temples in Singapore and added *“I am definitely not very traditional.”* Although celebrating Indian festivals is not very important to him. In India, he would probably celebrate the festivals, but he would not go to India just for festivals.

Eating habits in Singapore

Since he lives in Singapore, he **eats more healthy food**. He **uses less oil for cooking, eats more salads and reduces his rice intake**. Instead of rice he **eats more wheat, more fresh vegetables and fruits**. He **ate chicken and fish in Singapore** out of curiosity.

For **breakfast** in Singapore, he has **toasted bread and coffee**. For **lunch**, he eats mostly Indian food in one of the food courts. He states that he tends to eat more Indian food for lunch due to lack of choice in vegetarian food as he says there are only a couple of Thai and Chinese stalls which serve vegetarian food. So he keeps mixing *“one day this one day this”*. In Singapore, he looks at slightly healthier choices when choosing his food. He states that he tries to stay fit so he is conscious of what he eats.

Since he lives in Singapore, he **cooks dinner by his own**. On weekends he mostly cooks while on weekdays he cooks two to three times. He learnt cooking by watching his mother’s cooking style and observing which ingredients she used and now *“mix and match”* by his own. He also asks his mother about specific recipes. Concerning healthy food, he states *“I do believe my mother when she tells this”* as his uncle is an Ayurvedic doctor who taught his mother some things about healthy food. According to him, his mother has the biggest influence to his nutrition so far. About his own cooking style he says that he is

not cooking too spicy “... *maybe this is just my parents cooking style, I prefer it sweeter.*” When he comes home to India occasionally, his mum cooks a big feast for him. As a snack, he likes to eat apples in Singapore and drinks two cups of coffee per day like he did in India.

When cooking, he prefers some vegetables more raw, like capsicum, because it is juicier while spinach he likes more cooked. In general, he **cooks 50:50 Indian and non-Indian food**. He tries to do new things, like salad, soups, pasta, pizza, but adds that he mostly cooks what he learnt from his mother. He learnt from the South East Asian cuisine not to cook vegetables as much as in India, so he can still get the taste of the vegetables.

Sometimes he cooks for himself but when his flatmates are around they mostly cook together. He is very happy that one of his flat mates also likes to try new food and his other flat mates do not insist on having Indian food every meal. With close friends, he discusses about food and gets diet-related information by observation and by reading. He keeps visiting a few food sites on internet and follows some Indian and non-Indian food blogs like “*pioneer woman*” a blog from US containing veggie recipes. From the blogs, he got information about trans-fat stuff, MSG and about organic food and high “*carbs*”. To him, a balanced diet persists of a balance of vitamins, proteins, minerals, carbohydrates and fats. He tries to put more vitamins, minerals and proteins in his food and reduces “*carbs*” because from eating food with “*high carbs you get a lot of energy you don’t utilise the energy gets converted and stored as fat*”. Food with high carb and high fat content he declares as unhealthy. He felt unsure about answering the question whether Indian food is healthy. His weight did not change in Singapore.

Generally, he is a vegetarian and not eating meat on regular base. The reason why he is a vegetarian has more to do with his caste than with his religion. He tried to eat meat out of curiosity but mentioned, “*I don’t think I really grave for it or I would eat it on a regular base as...*” and added “*We don’t believe in killing animals for food, so I am happy being a vegetarian as such.*” He is deciding by his own which food he wants to try. One friend tried to convince him to try fish, but he refused.

IP c drinks milk, while he does not eat pure egg due to its taste. Eating eggs in cakes or ice cream is ok for him.

Concerning Indian food he says “*I ate Indian food 26 years of my live so its got a bit bored right now*” [laughing]. However, he admitted that some Indian dishes,

especially the ones cooked in his home, are *“comfort food”* to him and he would prefer it when he is sick.

Nevertheless, he feels more excited when he eats non-Indian food, like pasta or Mexican fajitas. His favourite foods are sweets.

He would be very happy when he would travel to a country where he cannot get Indian food and he would be very flexible in this as he likes varieties and *“it’s no point if I am flying ten thousand miles and then I go back to eating Indian food”*.

If he would live in another country overseas, he would eat Indian food from time to time in a restaurant or cook at home. Another point to show that Indian food is not too important for him is his comment that he would not make a trip to Little India just to buy food, but if he is there for e.g. meeting a friend, he would buy some food there.

He feels the taste of Indian food in Singapore is almost similar to its taste in India. While he adds that the South Indian food in Singapore is very specific to Tamil Nadu cuisine and may not exactly match food from his hometown, but that is ok for him.

Recently he tries to eat less fast food, sometimes he eats a burger, but not much as there are not many vegetarian choices and he does not like to eat a bun with lettuce.

He eats out in Singapore more than in India due to temptation and laziness. non-Indian restaurants are his favourite choice to explore all different cuisines. Sometimes he joins friends for a treat in Little India and then he has Indian food there. Mexican and Thai food are his favourite even if Mexican food is a bit spicy. Concerning non-Indian food he says *“Yeah I try whatever I can”*, but admitted that he is restricted to eat NIF for lunch as the vegetarian choices of other cuisines are limited in the food courts.

On festival days, he meets with friends, sometimes they do a puja and cook dinner together.

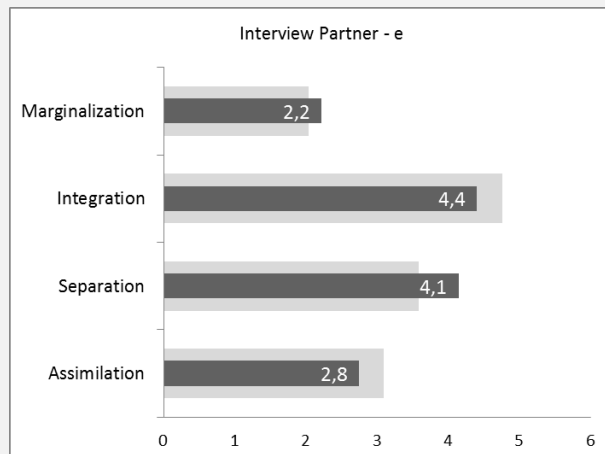
His family does not send or bring any food, as most items are available. For grocery shopping his most important points are quality, followed by price and a healthy choice. Most of his groceries are available in NTUC or Cold Storage and he goes to Mustafa for specific Indian ingredients or to a shop below his block that sells Indian items from Mustafa.

A15. Interview e

“So when you come out to Singapore, you won't feel ... I mean you won't get that taste, the original taste of ah Indian food ... I mean, it's Indian food [in Singapore] but ahm the taste is not the Indian taste “ (IP e, line 201)

Table A15: Characteristics of IP e (source: author's own)

Socio-demographic data						
State of origin		Karnataka				
Gender		male				
Age		26				
Marital status		single				
Housing situation		living with Indian flat mates				
Years living in Singapore		3,5				
Employment		Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• eats more bread• eats more egg• eats more fast food• eats more meat• more coke, carbohydrate drinks, sweet drinks• started to eat vegetables				
Affecting Factors		<ul style="list-style-type: none">• mother• friends• religion• health• taste• availability				
Acculturation Aspects		<ul style="list-style-type: none">• SGP is good, but getting boring• does not plan to stay forever• temple visits on regular base• praying and cooking at home with friends for Indian				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	dosa	9.00 am	outside [added this within the interview]			x
Lunch	veg biryani	12.00 pm	outside food			x
	coke				x	
Dinner	lemon rice	9.00 pm	home	x		
Snacks	butter toasted bread	4.00 pm	home			x

East Asian Acculturation Measure (EAAM)**General information about his life in India**

IP e stayed in India with his parents and his sister until he had finished his school education. When he started to work, he moved to a bigger city 100 kilometres away where he lived together with friends. Every weekend he travelled to his parents.

Commonly he visited temples with his mother. Even now, he goes to the temple on the first day during home trips with his mother on his way home from the airport.

Eating habits in India

“Meal time in India, yeah, meal time in India, yes. It's very important. Yes.” He learnt cooking by observing his mother and he helped her a lot with the cooking when he was at home. While his sister was never interested in cooking and never wanted to help, which he comments as *“a bit strange”*. Mealtime is very important in his family. For festivals, his mum prepared special items, mostly sweets but no meat. The day after the festival, they had spicy meat.

He did not eat vegetables in India and was often fighting with his mum about this. Once in two weeks he was eating small pieces of meat. They have many pizza outlets in India and something similar to McDonald's on the campus. Occasionally he ate fast food, but never considered this as a proper meal. While he stayed with his friends, he had breakfast, lunch and dinner outside. For lunch, he had North or South Indian food at the campus cafeteria. For dinner, he had Indian food outside. He drank coffee, tea, lime juice or buttermilk, but did not drink during mealtime.

The relocation

He wanted to change his job after two years in the same company and decided by his own to move. IP e left India for the first time in his life. It was difficult for him, because he was very attached to his mother. In the first one or two days in Singapore he was crying, he did not know anybody.

General information about his life in Singapore

He lives in a HDB together with five flat mates from different South Indian states. They are all Hindus and like to eat the same food.

Until now, Singapore was good for him. Actually, he feels that he has to move on. It is boring as he has been to all interesting places in Singapore several times. In addition, he is missing his family members and friends in India a lot. He travels home twice per year and said after one year in Singapore he lost all the sentiment and attachment to his mother, but still calls her every day. While his parents are traditional, he is not a very traditional person. He supports tradition and would not encourage somebody from maintaining the traditions or say it is bad to keep traditions. But he does not follow very strict.

Eating habits in Singapore

There were many changes in his diet after coming to Singapore. He **started to eat vegetables** because they are the tastiest food in Singapore while food in general is not spicy enough here. His **meat intake increased** in Singapore. He has **more pieces** of meat and is consuming **meat more often**, at least every week. One reason for this are the bigger portions of meat in Singapore: *“Example, like ah here I see rice and then you'll get one big piece chicken. But India, you will get rice and ah chicken pieces inside.”* Another reason is the less tasty vegetarian food in Singapore. Eating meat and oily food every day is from his point of view unhealthy and he believes to get fat from it. He eats lamb, chicken, fish, prawn and eggs, but no beef and no pork due to religious reasons. IP e tried pork once and immediately got a fever, so he never ate it again.

His intake of **coke, carbhydrated drinks and sweet drinks** increased in Singapore as well as the consumption of **toasted bread, egg, omelette and noodles** for breakfast. In the beginning, he cooked **breakfast** at home with his friends. They stopped that due to time reasons. Now he eats on weekdays dosa in the canteen for breakfast. On weekends, he cooks breakfast at home.

For **lunch**, he goes to one of the food courts and complained that the variety there is less compared to India. He does not feel comfortable to eat in food

courts in Singapore due to less cleanliness. He complained that the Indian food in the Singapore food courts is very different from what he ate at home. In the beginning, he did not try NIF, since he knew there is fast food available. After a while he started to try food from other countries, mostly Western food. His favourite Western food is pasta and tomato soup. While his favourite cuisines are North and South Indian and he also likes the Thai cuisine. He tried some Chinese and Malay dishes *"But until now, I haven't tried the soup, ahm ... typical Chinese style soup and the noodles, I haven't tried."*

He **cooks Indian food for dinner** with friends at home. They have built three cooking teams and every evening another team is cooking. About cooking he says *"Oh, yeah. In my case, ah ... sometimes I love cooking. You know, when you feel bored you can spend 1 hour or 2 hour in kitchen and then you feel really good."* He tried many different recipes and most of them came up good or at least eatable and he proudly explained: *"At my home, they call me as the chef."* For each curry, they use a different powder, like rasam powder or masala powder. He likes his mum's food and calls her sometimes for recipes. She tells him on the phone step by step what to do. Later she will call him to ask how the recipes came out. He termed his mother as the person with the biggest influence to his nutrition. She also tells him what to eat when he is sick: *"...last week I got a fever so, she [his mother] was saying that, 'Okay, one month you do vegetarian then you may feel better.'"*

Homemade food is for him healthy food and he declared Indian food to be healthier than Singaporean food. Since he lives in Singapore, he gained more than 10 kg, but he does not know why.

In this month, he does not eat meat. One of his roommates is very health conscious; he told IP e that he will get heart problems by eating lots of meat. Furthermore, this is an important month for IPs favourite god Ganesh. *"So for this month, there will be two reasons ... traditional way, ah I'm not eating [meat] and also to health conscious."* His caste does not restrict him from any food. Although he knows the caste of his roommates and friends in Singapore, he does not care about it as he does not believe in the caste system, but also does not have points towards it.

When he had non-vegetarian food before a temple visit, he takes a bath before going to the temple. His parents are doing the same. One day per month, on the fourth day of full moon, he fasts for the god Ganesh. Than he does not eat for the whole day and has dinner after he comes back from his temple visit. He kept this tradition from India. Ganesh is his favourite god that is why he celebrates the Ganesh the festival most. He cooks special items that he cannot

find in a restaurant in Singapore, for the Ganesh festival, and goes to the temple on that day.

His **fast food intake increased** in Singapore. During the first one or two month in Singapore, he ate fast food *“almost all the time”* as he was not aware on the Indian restaurants surrounding his place. McDonald’s is available in all the shopping malls *“than you can go and eat there”*. After this first month, he got bored of Burgers and fries and now eats fast food around once a week *“whenever we don’t have option”*. On weekends, they visit Indian restaurants for dinner.

When staying in other countries he can survive with Western food three days or one week: *“Ah ... maybe after that, I may feel, no, I'm missing something. Definitely, yes.”* He is not too happy about the Indian food in Singapore and commented that the style of cooking is completely different in India: *“I mean, it's Indian food [in Singapore] but ahm the taste is not the Indian taste.”* When filling out the 24 hour dietary recall he marks the Indian food he ate for lunch in a food court as “Other Asian food” because it has not the original Indian taste. While the home cooked dinner, he marked as “Indian food”. Most of the recipes in food courts and restaurants they have changed, maybe because some groceries are not available or too expensive in Singapore. Hence, the taste is not original anymore. As an example, he explained that there is no concept for vegetarian Biryani in India, they use a different term for it and the taste of the Biryani is different from what they get in India. Also in Singapore, most restaurants serve yellow rice for Biryani, in India it is not like this. Only in Little India, *“they use the exact method how they cook in India.”* While he gets all groceries in Singapore, he misses the range of food varieties they had in India. Food is very important for him but he states: *“Eating with the friends will be different from eating with families.... Yeah. It will be that you have people around you, your parents around you or somebody around you. So you feel maybe better over there, than rather over here.”*

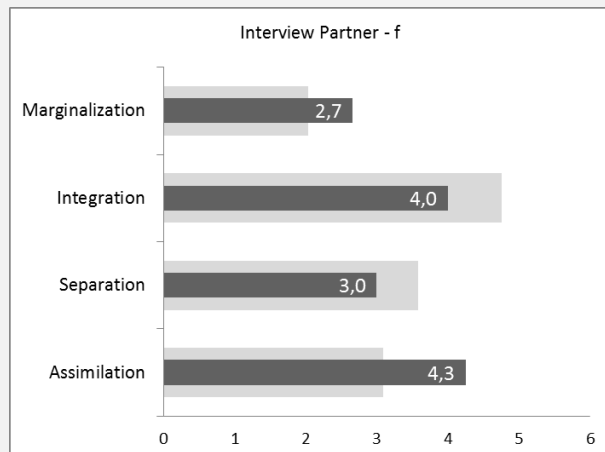
When he travels to India his mother will prepare for him boxes with hand-made masalas which will last to prepare curries for one year. *“When I come first... first time ah to Singapore, I think ah ... my luggage was about 40 kg. In that I think 25 kg was all groceries.”* [IP smiling] . He purchases food at NTUC, Shop & Safe and Indian items at a local Indian shop. In general, he prefers to buy the groceries he has tried before. For specific Indian items, like butter for dosa or Masala he goes to Little India.

A16. Interview f

“(…) I haven’t explored too much of Singaporean cuisine at all so I really can’t comment on … I am very sceptical about the oil they use or its mixed with meat so I have never tried it so I am not too sure about Singaporean cuisine.” (IP f, line 301)

Table A16: Characteristics of IP f (source: author’s own)

Socio-demographic data						
State of origin		Karnataka				
Gender		female				
Age		29				
Marital status		married				
Housing situation		living together with husband				
Years living in Singapore		4				
Employment		PhD student				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• nutrition has not changed much• started cooking• eats out more often• changed breakfast				
Affecting Factors		<ul style="list-style-type: none">• mother: learnt her about healthy food• cast: vegetarian• health• trust: not trusting in SGP vegetarian food• attitude towards NIF• time & convenience: changing breakfast				
Acculturation Indicators		<ul style="list-style-type: none">• SGP is a nice city• not planning to stay forever• visit temple and eat out Indian food for festivals• temple visits once in a fortnight				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	puffed rice, Barley water	8.00am	home cooked, lightly seasoned	x		
Lunch	salad, beans, curry, rice, yoghurt	12.30 pm	homemade	x		
Dinner	salad, beans curry, rice	10.00 pm	homemade	x		
Snacks	toasted bread & ketchup	6.00 pm	home		x	

East Asian Acculturation Measure (EAAM)**General information about her life in India**

Before she came to Singapore, she lived together with her parents.

Eating habits in India

She and her husband are belonging to the Brahmins caste; hence, they are not allowed to eat meat. IP f added that she is also a vegetarian due to her personal taste.

For **breakfast** her mum used to cook Indian food. Once a week when the mother did not have time they ate bread for breakfast. Her mother or father packed **lunch** for her. She did not like outside food *"It's just that I ... outside food does not suit me much diet wise so I always prefer home cooked food so my mum or dad used to pack food for me"*. She mostly had dinner at home. Her snacks included *"bread or some soup or some fruit"*, which she termed not typical Indian food.

Her mother, who was always concerned about the nutrition value of food, mostly did cooking. She made sure that the food is not overcooked and has the right amount of oil, sugar and salt.

She explained that not all outside food in India is healthy. Depending on the place, food can be contaminated. She ate out once a week. Cakes and pastries were her favourite fast food, which she ate when going out with friends. September and October are the specious festival month on which they prepare every day some other food for the god.

As they are vegetarians, they do not follow special food restrictions when they go to the temple. She added for meat eaters there might be rules not to eat

meat when going to the temple. Concerning to her Hinduism educates predominantly against beef and pork, but she also admitted that nowadays things are changing.

The relocation

She got married in August 2004, than her husband got a job in Singapore and she followed him around six to seven month later, in 2005. Before, she worked in UK and moved from there to Singapore. UK was the first country she visited out of India and she was there two times always for three to four month, but she did not talk about her nutrition there.

General information about her life in Singapore

She says about Singapore, *"It's a nice city"*. Nevertheless, it is a small country and she could not imagine staying there for longer than five to ten years.

As it is geographically close to India and she visits her parents twice a year, she did not find it very difficult to move. Life is not very different compared to India and because she was in UK before she was *"already experienced in that"*.

Around once in 15 days they go to Little India to buy food, eat in an Indian restaurant or hotel there and go to the temple.

Eating habits in Singapore

She explained that her nutrition has **not changed much**. Only that she is **used to Western food like subway or pizzas now**. She does not like Chinese food and does not like outside food much. They mostly prefer Indian food that is why they usually cook at home. Contrariwise, she has no time to cook and **eats out more often since they life in Singapore**. At least once a week she eats outside. Only since pregnancy, she is trying to cook more at home.

Her statement is not very clear. Most probably, she meant that they ate out more before she got pregnant due to time reasons. Now she is graving more for home cooked food since she is pregnant. For **breakfast they have bread, oats, cornflakes and Barley water**. Since pregnancy, she tries to eat Indian brunch in-between. She prefers to pack food from home for **lunch** for university instead of going around and looking for Indian food. Alternatively, she eats Indian vegetarian food at the university canteen or Western food from subway. For **snacks**, she has fruits or a bag of chips. She cooks **dinner** every alternate day and prefers cooking at home with her husband. When her mother or mother-in-law is there for visit, they will do the cooking for the whole day and prepare Indian breakfast. At the evening of the interview, her mother-in-law was in Singapore and prepared the dinner. Her family mostly brings spices when

they come to Singapore: *"I do ask her [mother] to get some particular Indian spices that we need to go all the way to Mustafa than it is easier to get it from India."*

They **mostly cook Indian food, very rarely pasta**. *"I am traditional but ah probably I am still not so adapted cooking, Indian cooking so I just cook just to eat something so I don't spent a lot of time."* When they cook Western food they just toast bread or make Indianized pasta: *"I put some Indian Masala for ... Indian spice for the pasta, I buy regular pasta from FairPrice and cut vegetables all that but instead of I mean I have some sauces ketchup or whatever in addition to that I add some Indian spice also just for taste".*

She learnt cooking from her mum and since she is pregnant, she asks her mother for recipes and tries to cook tasty food. Before the pregnancy, taste was not very important for her. Her mum asked her to drink Barley water during pregnancy to avoid an infection and keep herself hydrated, she also requested her not to have Papaya and Pineapple in the first trimester to avoid a miscarriage. While in India they prepared the Barley water at home by soaking Barley seeds, in Singapore she gets the ready-made Barley water in FairPrice.

She stated, so far her mother had the highest influence to her nutrition. Sometimes she reads about nutrition in the internet.

IP f does not eat eggs and explained *"(...) yeah food is important because I think, we don't eat egg so that's why choices are limited, we don't eat egg than we don't eat meat so and plus I don't really like Chinese food much, I don't mind Western, but I don't like Chinese food much. So we need to pick and filter out all the restaurants so it's easier for us to pick at least some food or ..."* Mostly during travelling, they pack food, in case they do not find anything, they have at least bread and butter.

Once or twice a week she eats fast food. *"I just pick up if you consider cakes and pastries also as fast food I just pick up a pastry or just pick up a pack of chips because I if I feel hungry I just pick and eat, its more because of the lack of time."* She stated fast food may not be good nutrition wise, but she likes the taste of it.

She complains that the cooks in food courts and restaurants use a lot of oil for cooking and fry vegetables. When she cooks at home, she uses less oil and steams the vegetables. For her it is easier to monitor the cooking process hygiene wise than outside food *"so therefore I feel home food is more nutritious"*. Healthy foods are for her cooked vegetables or lentils, while too much of oil, butter, sugar, salt, cheese and saturated fats are unhealthy.

Once a week or once in two weeks, she is in Little India and eats Indian vegetarian food there. Other than these, she mostly has Italian food outside like pizza or pasta or sometimes also sandwiches. She explained to be not very open to try all kind of food because she does not trust the food to be really vegetarian. Although she trusts in Western food like bread, sandwiches, in food from Subway and all Italian foods like pizza and pasta, she explained: *“(...) but if it’s Chinese food I am not really sure whether there is seafood or there is meat or ... because they don’t really share between fish and vegetarian food because it’s that particular vegetarian concept it’s not available whereas in western food there is they exactly say what’s meat and non-meat so I am generally suspicious of food where meat is mixed with vegetables so I tend to play safe”*. Hence, she stated that she cannot comment on the Singapore cuisine, as she has not explored it too much although she declared the Singapore soups and steamed vegetables as a healthy choice. Malay food is not her favourite food as well, because it is too oily and lacking of vegetarian choices.

They celebrate the Indian festivals in Singapore *“on a smaller scale”* and do not cook special festival foods. Instead, they have Indian food at a restaurant on festival days and go to the temple. When her mother or mother-in-law are in Singapore during festivals, they will cook the festival food.

She says hygiene wise food in Singapore is ok, but Indian food in India is tastier than Indian food in Singapore. She misses Chaat food, which is a section of Indian fast food, like deep fried items or puffed rice etc. This is not easily available in Singapore. Besides that, she said she gets mostly everything.

For grocery shopping, hygiene is a very important factor for her. She avoids places where meat and vegetables are placed together. She goes to Mustafa once in 15 days or a month for exclusively things; otherwise, she buys her groceries at FairPrice and Cold Storage for vegetables and rice. They also have small Malay and Indian shops around where she buys lentils and basic spices like chilli powder. They do not go to wet markets, as they prefer places where the food is packed separately for hygiene reasons. When her mother-in-law is in Singapore, they go to Mustafa more often, as she cooks a lot of food.

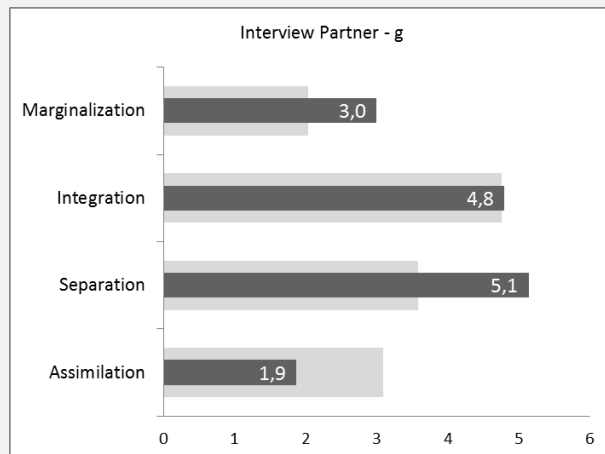
Life situation September 2013: IP f gave birth to her daughter in Singapore in 2010 and got meanwhile the status “Permanent Resident” in Singapore.

A17. Interview g

"I prefer Indian food, ok normally taste point of view ok even for health also I prefer Indian food." (IP g, line 426)

Table A17: Characteristics of IP g (source: author's own)

Socio-demographic data						
State of origin	Andhra Pradesh					
Gender	male					
Age	31					
Marital status	married					
Housing situation	living with Indian flat mates					
Years living in Singapore	2					
Employment	Engineer					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• changed a lot• eats more fast food• eats out more often• increased meat intake• changed to eat chicken, before ate only mutton					
Affecting Factors	<ul style="list-style-type: none">• mother• friends• religion• health• taste• attitude towards NIF• convenience					
Acculturation Aspects	<ul style="list-style-type: none">• SGP secure, but high cost of living• does not plan to stay forever• goes to temple for festivals, when wife is in town she prepares festival food					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	upma, vada	9.00 am	outside [added this within the interview]	x		
	tea	9.00 am			x	
Lunch	rice, sambar, potato curry, carrot curry, yoghurt	12.10 pm	outside food	x		
Dinner	burger, french fries, green tea	7.30 pm	outside		x	
Snacks	bread toast with kaya, Milo	4.30 pm	outside		x	

East Asian Acculturation Measure (EAAM)**General information about his life in India**

IP g was the participant with the most traditional background. He grew up in a small village, close to the seashore, between Chennai and Bangalore. A description about his traditional life in his village can be found as an excursion in appendix A11. After his education, he left his village for work, while his wife and child stayed with his family in the village. He stayed three years in Hyderabad and further three years in Chennai. From there he travelled home once per month. Before they moved to Singapore, he stayed together with his wife and child.

Eating habits in India

His caste allows taking non-vegetarian food. In his family, they are eating mostly seasonal food, especially fruits and vegetables, which is available in their home garden. Curries change as well with the seasons. They do not have much connectivity to the city, so they do not import much food. While living in his village his wife or his mother did the cooking. When they moved to town every second month his mother came to their home for cooking, otherwise his wife was cooking. He praised the varieties of pappadam, which his mother can cook.

He ate meat twice, if relatives were there three times per week and he calls himself as a “part time vegetarian”, because some days of the year he will be vegetarian due to the calendar or functions. He and his mother do not eat non-vegetarian food on Saturdays due to religious reasons. On the main festival day, which is the first day of big festivals, they do not take non-vegetarian food, while on other festival days non-vegetarian food is allowed to eat. They also avoid non-vegetarian for some functions like childbirth, death, marriage and on

the day when a baby gets its first solid foods. When a couple fixed a marriage until marriage ends, they do not eat non-vegetarian food as well. A big range of special food will be prepared on festival days.

He was eating 80% of the meals at home. For **breakfast** they had different varieties like idlis, dosa, pokora, puri, chapati, upma. Breakfast was cooked fresh every day and the meal is finished with milk or tea. They ate breakfast all together once or twice a week, when he was not hurrying to the office. In-between the meals they drank fresh seasonal or packed juices, or they had coffee, tea or milk. Now they also have a “Coca Cola type of cool drinks”. He also likes to drink payasam and every day he is consuming 2-4 litres plain water: one litre after waking up and 200 - 300 ml one hour after every meal. His yoga teacher from his village advised him to take more water before and after one hour of each meal. He cannot follow this advice exactly, but tries to do so.

He always packed fresh **lunch**: one pot with pickles, one curry, one sambar and one curry rice. For **dinner** he had the leftovers from breakfast and lunch. Between 4 pm and 6 pm in the afternoon, they had **snack time**. Therefore, one sweet and one hot snack were prepared at home. They always eat both, hot and sweet snacks together. The sweet snack could be stored 15 days without fridge. On weekdays when he was working, he had snack time at the roadside shops. In his home village, there was no restaurant at all. They had only one roadside stall who was selling tea and breakfast and some evening snacks. Therefore, he did not eat outside there. After moving to town, he had 20% of his meals outside. His tendency was for Western food like pizza, pasta and burgers until his yoga guru taught him better to eat food from his home village. He ate fast food like McDonald’s around once or twice per year.

The relocation

He moved to Singapore mainly to earn enough money, so he can go back to his village without working. Emotionally it was difficult for him to leave India, but there was no other choice.

General information about his life in India

He said about Singapore it is secured, but very expensive and he cannot imagine living in Singapore forever. His intention is to move back to his village and stay there.

Now he is staying with four friends, who are all from South India, two from Tamil Nadu and two from Karnataka. Before he stayed with his wife and child in Singapore, but his wife moved back to India with the child to give birth to their second child. He is travelling to India one or two times per year.

In the beginning, he used to go to the Perumal temple every Saturday, now he goes every second Saturday. He said he is not a very traditional person, but tries to maintain 50 to 80% of his traditions. His second baby was born in July in India and he is only allowed to see her after doing offerings to god. He even has not seen a picture from her yet, as his mother told him to wait some more time. If he would stay in India, he would need to do offerings in the temple on 11th day after the birth, than he would need to see the reflection on the oil first and then can see the baby.

Eating habits in Singapore

His nutrition changed a lot after coming to Singapore. He eats **more fast food and non-vegetarian food** and stated his *"meat intake is huge"*, because he has meat daily. In addition, he has **more often outside food**. In Singapore, he is usually eating meat every day. He prefers to eat non-vegetarian food as in Singapore it is tastier than vegetarian food. In the beginning, he ate mostly mutton, but after the doctor advised him not to eat red meat, he **changed to chicken**. His father died due to heart problems at the age of 35. IP g has *"huge blood cholesterol"* and feels that he should avoid oil, but added that he still eats it. Especially French Fries he finds very unhealthy as he can "feel the oil when I touch" but he admits that most Indian items are also oily.

He has a book about how to reduce weight wherein it is suggested to walk. Consequently, he started to walk more and slightly changed his diet and lost about 8 to 9 kg within the three years he stayed in Singapore.

He explained that he needs some standard Indian items daily: curd rice, pickle, first eat one or two hands pickle rice, than varieties like mangos and tomatoes, chicken, mutton or fish.

His excitement about eating Indian food is reduced a bit: *"(...) two years back when I went to UK first time in 2006 somewhere yeah really I felt after one or two month without getting Indian food if I got some Indian food really I felt very happy, but now I may not feel that much excitement."* After two years in Singapore, he got used on eating Western food like McDonald's or KFC and said: *"I got some confidence that I can manage with other foods I started since I am repeatedly eating I maybe liking."* He maintained his vegetarian diet on Saturdays, which his mother asked him to do for religious reasons. However, since his daughter was born five month ago, he is not eating non-vegetarian food and will only start to eat it ones he has seen his new born daughter.

When goes to a temple he does not eat non-vegetarian food, between bath and temple visit he has no food, unless the temple visits are very urgent “(...) *than only we will just say sorry god and we will go.*”

Beef is a taboo food for him, because the cow is a sacred animal, which they use to pray for. He thinks also pork might be not eaten due to religious reasons, but he is not sure about this.

For **breakfast** he eats one of the different Indian varieties like puri or dosa in the company's basement canteen. Also for **lunch** he eats out and said lunch will be 99.9% Indian food from one of the Indian stalls, which are close to the company. Once per month, he has Western food like fish and chips for lunch. But his favourite food is Indian food and he would always prefer Indian food, even if it would be the more expensive option: “(...) *because of cost factor I may not stay away from Indian food ... if I have a chance to get Indian food and western food still I prefer Indian food.*”

For long term, it would be difficult for him to stay without Indian food and he would search for the nearest Indian item e.g. Malay food, which is close to Indian food in some items. He feels there is a “*psychological relation*” between Indian food and feeling happy: “*If I find some Indian food definitively I will feel happy to eat that one.*” When he eats non-Indian food, he mostly has Western food. Only once or twice in two years he ate Chinese food and very rarely Malay food. About Chinese and Malays food, he stated: “(...) *I won't feel satisfied with the food, so usually I won't go for that.*” Whenever it is possible, he invited non-Indian friends for Indian food. He eats **dinner** in office if he stays until late there, because it will be ordered from the company for all colleagues who work overtime. Hence his fast food intake increased a lot in Singapore. “(...) *yeah changed a lot, most of the.... ok in India it is really rare to eat burger or MC Donald's maybe once or twice in a year but here once or twice in a week I am forced to take this Hamburgers or fries this kind of stuff.*” Sometimes he has dinner in an Indian restaurant on the way home otherwise he cooks dinner with his flat mates. They cook in a timetable. Each of his flat mates has to cook once or twice per week. He learnt to cook after coming to Singapore, but admitted that he mostly cleans vegetables or onions and does basic stuff. His roommates will do the cooking and whatever the others cook, he will follow. They usually prepare one curry and curry rice, maybe one chicken; mainly Indian foods.

When his wife is back in Singapore, he will have breakfast and dinner at home and pack lunch, and will only eat snacks outside. Once per week, she will explore to cook puri or chapati, which is North Indian food. On the weekends,

the family may go for having breakfast or lunch outside, depending on the time they have.

While his wife is in India, he is eating out 90% of his meals. Normally he goes to Indian stalls in food courts; only on weekends, he sometimes visits restaurants in Little India. He needs to relay on roommates when choosing a restaurant or food court.

His wife will prepare festival food when she is back in Singapore. Now, while living with his friends, they do not prepare it. On festival days, they just go to the temple and pray. They did not go to restaurants for special food.

He always brings food back from home trips, mostly pappadam, because he can store it well. He misses items from his home garden and the milk, which a cow gives in the first few days after giving birth. From that milk, they make a special sweet, which he cannot get in Singapore. There are also some specific items from his home state that are not available in Singapore as most Indian items in Singapore are related to Tamil Nadu.

When he is doing groceries shopping, for vegetables the quality is most important for him. For rice, he would choose the medium price, as the rice prices are almost ten times higher in Singapore. Most of the groceries they buy at the local supermarket, only for a few items they go to Mustafa.

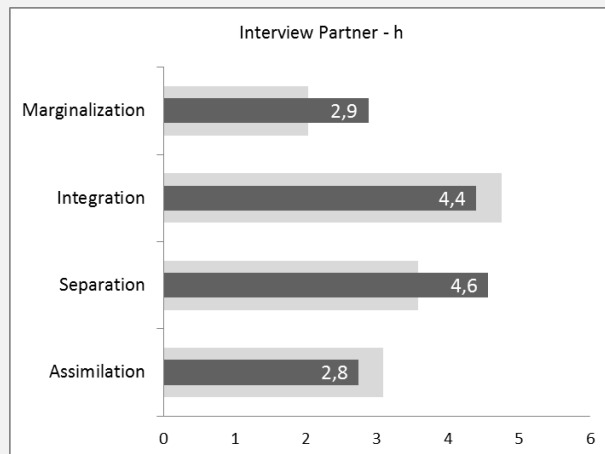
Life situation September 2013: IP g moved back to India.

A18. Interview h

“Ah ... for me, I was really worried because I never do even a single house job. Yeah. [smiling embarrassed]. So ... even eating, my mother used to feed me. She [smiling embarrassed] ... [short thinking] ah usually through hands Indian usually eat through hands. So she use her hand to feed me ... ah every time.” (IP h, line 83)

Table A18: Characteristics of IP h (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		male				
Age		20				
Marital status		single				
Housing situation		living with Indian flat mates				
Years living in Singapore		2,5				
Employment		IT				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">eats only two times per daymeat intake increasedeats Western and Chinese foodskips breakfast				
Affecting Factors		<ul style="list-style-type: none">mothercastetastefriends				
Acculturation Indicators		<ul style="list-style-type: none">SGP is clean and developed, but Indians are treated badlyplans to move back to India in his 40sreduced temple visitsdoes not celebrate festivals				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	skipped					
Lunch	rice with sambar, rasam, vegetables, pappadam		outside	x		
Dinner	rice pancake (Dosa) with onion and egg		homemade	x		
Snacks	no information					

East Asian Acculturation Measure (EAAM)**General information about his life in India**

He lived in India together with his parents, his brother and his sister in law in a town in Tamil Nadu. They follow the traditional family constellation, meaning that his sister in law, an IT programmer stopped working after getting married to help his mother in the household. Because they are *“a bit rich, middle class family”*, his sister in law does not need to go to work. He went to the temple with his mother once per week, while his father is a Hindu but does not believe in gods. Since he lost business and people cheated on him, he stopped praying. IP h loved to celebrate festivals. He is belonging to the Sengunthar Mudaliar caste, they are the workers for the Jaminda, who is concerning to IP h, the richest person of the village.

Eating habits in India

His mother fed him with her hands in India, until he moved to Singapore. She still feeds him when he is in India for a visit. IP h explained usually this is common until the first six years of a child life.

In India, he asked his mother to cook many things for him for **breakfast**. His favourites are dosa, idli with chutney, puri, chapati and pongal. Only sometimes, if his mother did not have much time she gave him Kellogg's or noodles with magi. His mother eats in general very less food. She is in a diet because she has low sugar and low blood pressure while his father has high sugar. He mostly did not join his family for **lunch** because he was out with his friends and came back when most of the family was back to work already. Then his mum fed him. His favourite food in India is sambar cooked by his mother. They had **dinner** at around 10 pm together with the whole family. For dinner, they had Indian breads like chapati or paratha. After dinner, they talked for 15 minutes

“about all matters” and then went to bed. On Saturdays and Sundays his mother cooked **snacks**, mostly Indian snacks, sometimes she prepared also Western snacks which she learnt from television. He never ate fast food in India and he has never seen McDonald’s or KFC there. But *“(…) they got other fast foods like Chinese, Indian-Chinese fast foods.”*

Every Sunday they went to a restaurant with the whole family for Indian Chinese food, which, he says, is very delicious compared to Chinese food in Singapore. Meat was like a holiday food for him. Every Sunday they ate meat for lunch or when they were going to a non-vegetarian restaurant. They do not eat pork and beef, but chicken, fish and mutton. Beef is a taboo food for them, because for most Hindus the cow is a god and moreover in his caste, they do not eat beef. That is the only restriction he got from his caste concerning food. Also in his caste, they do not eat non-vegetarian food before they go to a temple. He never drinks cold water and does not like to eat bread, which is also not a common food in his hometown.

The relocation

He says about himself: *“I am a homely person.”* His mother wanted him to go to Singapore to get more knowledge, settle in life and mostly to earn money. Therefore, his mother and his brother planned the relocation. Getting a visa to Singapore was quite difficult for him.

He plans to stay in Singapore or *“any other foreign countries with a good payment”* till his 40s, as he needs a lot of money to build his own house in his town in India.

During the first weeks in Singapore as he missed his family and he felt afraid of everything. He was very worried, because he never did *“even a single house job”* and was fed by his mother until he left India.

General information about his life in Singapore

About Singapore, he states that it is a clean and developed country. However, Indians experience some restrictions in Singapore: *“If you fight, then we need to go back to India ... So we usually like ah [short thinking] bend for others. Ah ... even if they treat us badly, we don’t care.”*

He lives together with four roommates from Kerala and four from Tamil Nadu. Two roommates from Kerala are Christian and he explains that they do not disturb or criticize them *“(…) because we have about thousands and thousands of gods and they don’t know even [laughing] which god we are praying ... But for Christian, they have only one. So ah... so they think it’s hard for them. So we*

don't criticize them."

In Singapore, he goes to a temple once per month to pray to his family's god Murugan. Sometimes if he is in trouble, he prays in Perumal temple, as Perumal is the god for money.

He brought ash from India from their own religious temple and explained that they put this ash on their forehead every time they leave home. In Singapore, he puts only a small dot above his nose and uses this only when he has fear or does not feel confident, as the ash is like a protection. IP h is afraid because nowadays people like the Christians may criticize this, also in India. Everyone is socialised and most people do not believe in "*supernatural things*."

He does not follow most of the religious things from India and said: "*I think of them. But I can't ah actually enjoy. So it's ah in my mind as well as inside my heart so I don't forget it. I will be an Indian traditional guy.*"

Eating habits in Singapore

When coming to Singapore he lost 15 kg in the first five month, because he felt very homesick. After a while, he started to "*mingle with some local food*" and he started cooking, so at least he does not lose weight anymore. During his last home trip, he gained three kg in 15 days. When his mother fed him in India "*I eat about five times a day*", while in Singapore he **eats only two times per day**.

He skips **breakfast**. For **lunch** he eats mostly Indian food, very rarely Chinese. There are not too many choices for Indian food around his working place. He prefers rice, fried rice or chapati. His favourite cuisine is the Indian cuisine and he cannot live without Indian food more than one week. After that, it will be "*really difficult*", as he cannot live without rice, even Chinese rice is ok. About the opportunity to stay in a country where not many Indian food is available he thinks: "*But if I've got a chance to live with my mother or with my wife, then I hope ah ... they can cook for me so I can live long there.*" His most favourite foods are dishes cooked by his mother like idli with chutney, sambar and chicken. He misses these foods and can get them very rare in Singapore and it is not as good as mums' version.

Compared to India he eats **dinner** late in Singapore at around 11 to 12 pm and he watches TV until 1 am. For dinner, he likes to eat Indian tiffin like chapati or paratha. He **cooks dinner by himself four times a week and on Saturday afternoons**. Otherwise, he eats out mostly Indian food for dinner. If no Indian food is available, he prefers to eat Western food like chicken cutlet, French fries or the McChicken meal from McDonald's. If there is no other choice, he can eat Chinese food but does not like the smell and taste of pure Chinese food: "(...)

because they actually use it ...without any masalas or Indian spices. They're just the pure meat they use. So I ...I don't prefer to eat that." If he has to eat Chinese food, he takes just enough *"to survive"*.

His roommates cook for themselves as they all have different working times. He does not have a problem if his roommates eat beef beside him: *"No, no, no. In ... in Singapore I don't actually follow m... mostly all of the ... ah ... religious things here."*

IP h started to cook Indian traditional food, e.g. sambar, rice, gravy for rice or upma, because he does not like the Singapore food. He admitted that he cannot cook as good as his mother and it is not easy to get Indian foods in Singapore, except in Little India. Due to his big respect to his mother's cooking skills, he is not cooking meat, as he does not want to spoil her meat dishes. He made his first cooking experience in Singapore and he calls his mother for cooking advices and cooking items. TV shows about how to cook easily and how to prepare Indian food quickly are interesting for him.

The ingredients for cooking he mostly brings from India. Once per month, he goes to Mustafa for Indian ingredients like chili powders and sambar powders, all the other ingredients he buys from a nearby place. Most important for grocery shopping for him is freshness, followed by the quality, *"last part is the price"*.

He **eats meat almost every day**. His **meat intake increased a lot**, hence he reduced his temple visits in Singapore, which he explained as following: *"Ah ... we don't get ah actually the good vegetables here in food court you can see it's ... really, really very bad vegetables. So there's no choice. I need to switch over to the meat ... So that's the only choice. And that is also the reason that I ... that's become rare for me to go to temple."* For drinks, he **takes sometimes Redbull** during the day and milk at night. His mother advised him to drink three to four glasses water per day, which he is following.

He **eats out at least once per day for lunch**. Every Saturday night he goes out with friends for eating *"great meals"* in an Indian restaurant in a hotel. Eating rice with sambar is a must for him on weekends. Fast food is not his choice of eating, but if his friends suggest going to McDonald's or KFC he joins them. This happens not even once a month. IP h likes to eat burgers stuffed with meat and adds they might be healthy. He does not celebrate festivals in Singapore, as he needs to work on festival days.

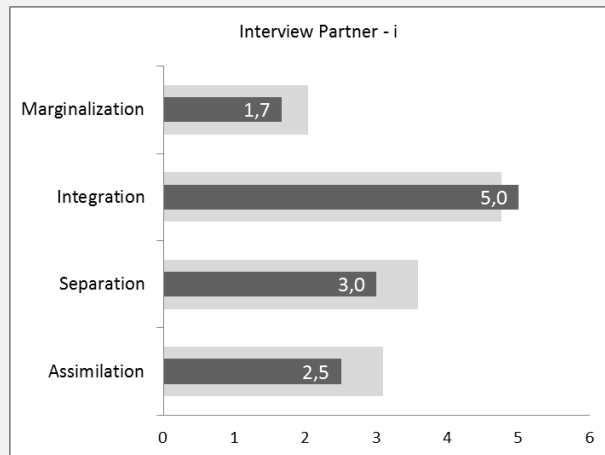
Life situation September 2013: IP works for another company in Singapore.

A19. Interview i

“Food means everything (...) food is really most important.” (IP i, line 932)

Table A19: Characteristics of IP i (source: author’s own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		male				
Age		27				
Marital status		single				
Housing situation		living with Indian flat mates				
Years living in Singapore		2				
Employment		Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• NIF for breakfast• more North Indian food and NIF• started to cook dinner with his friends.• eats out less• more fast food• reduced rice intake• drinking and eating together				
Affecting Factors		<ul style="list-style-type: none">• health: changed breakfast, reduced rice intake• mother: recipes for cooking• ideology: vegetarian• environment: fast food in office• religion: partly not eating egg• price: eating out less• availability: changed breakfast				
Acculturation Indicators		<ul style="list-style-type: none">• likes SGP, but plans to go back ones he is married• visits temple on regular base• celebrating festivals to lesser extent				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	poori with potato	10.00 am	outside [added this within the interview]	x		
Lunch	rice with potato, cabbage, curd	1.30 pm	outside food	x		
Dinner	double cheeseburger without meat, french fries, green tea	8.30 pm	outside		x	x
Snacks	biscuits, banana		outside	x	x	

East Asian Acculturation Measure (EAAM)**General information about his life in India**

IP i grew up with his brother and his parents in a very rural area in Tamil Nadu, where his father works as a farmer. After finishing university he moved to Chennai for work, from there he visited his parents every second weekend.

His family is very traditional and he said about himself that he is also a very traditional and sensitive person. He admitted, that he cannot be blind to all traditions as some of them do not fit into the modern world. At another point of the interview, he explained to be a free thinker. Sometimes he travelled with his father on a one or two day trip to their most important temple. He is very proud of the UNESCO heritage sites in his state and of his state's history, but he criticized the colonial area in India: *"(...) my old generation people, they have been really good on a lot of aspects. It's that 400 years of colonial rule that ruined us."*

Eating habits in India

While staying with his parents, the mother was the cook in the family. His father cannot cook. He always ate at home. During his initial phase in Chennai, he needed to cook for himself, as he did not have money for eating out. Once he earned his own money, he did *"not even do a single dot of cooking"*. For **breakfast** he went to the same restaurant every day, as from his point of view, the quality of restaurants in India is not always good and it is necessary to select a restaurant carefully. For **lunch**, he went to the canteen and **dinner** he had outside or at his relatives' home. When the parents visited him, his mum cooked. He lived together with friends in Chennai. There were little chances to eat fast food, as there was no McDonald's and only one KFC in Chennai.

His mother is a strict vegetarian; she does not even eat eggs. His father is a non-vegetarian but after getting married, there was no way for him to eat meat. So IP i never tasted meat in his childhood. In college and later at work he got chances to taste meat and tried it for approximately 50 times out of curiosity. He eats eggs and drinks milk. But he does want to be a non – vegetarian, due to ideology reasons. He believes that there is *“overexploitation by the humans on other living beings on this world ... it'll definitely impact the world in a non-reversible way.”* Being a vegetarian has for him nothing to do with caste or religion. There is *“no hard thing in Hinduism which forbids meat eating”* and his caste does not forbid him to eat meat.

The relocation

He moved to Singapore, as he wanted to change his job. His ambition was to move to US, but it was too hard to get a Visa there. Singapore is also good because it is only three hours flight from home. When moving to Singapore, he left India for the first time. It was hard for him to leave his home and even today when he flies back from home visits he asks his parents not to come to the airport as it is too hard for him to leave.

General information about his life in Singapore

In Singapore, he stays with Indian friends near Little India, where he goes to once in a week. Twice per year, he travels home for two weeks.

Singapore is a nice place for him, where he can play badminton with his friends and go for swimming. It is the most secured place in the world and another good thing is, that he can reach all facilities within one hour or one kilometre. He stated to have a good life in Singapore. Nevertheless, when he gets married it is 100% sure that he will go back to his family.

He still follows his traditions in Singapore by wearing new clothes on festivals and visiting the temple once in two weeks or for festivals. While he explained that his friends were brought up in cities and do not follow these traditions too much.

Eating habits in Singapore

Food wise he said he can survive in Singapore, but *“surviving is different from pleasing your tongue.”* He changed his **breakfast** completely from traditional Indian breakfast **to milk and Kellogg's**, which he eats at his apartment in Singapore. When there is less time, he goes to the canteen for breakfast and has **Western style breakfast there, as bread and eggs or he has Singapore style breakfast like noodles**. The Singapore Indian breakfast they offer is from

his point of view not spicy enough and it is tough to find tasty Indian breakfast. Hence, he changed to Western or Singapore style breakfast. He does not like the food in Singapore very much, especially the breakfast, however, he thinks: *"But here, in this ... ah, the change around here is good for my health, because it's light food so it should be fine for me. Yeah. My ... not to my tongue, [IP laughs.] but to my health it should ... it's better."* For **lunch**, he has **Malay vegetarian or Chinese vegetarian food sometimes**, but tries to eat Singapore Indian food three times a week. He **eats more North Indian food** in Singapore, due to the higher availability in the food courts. On Fridays, he usually visits with his colleagues an **Italian restaurant and has Spaghetti** which he likes very much. In the evenings, he **cooks dinner with his friends**. Every evening one of them has to cook. They cook South Indian food, rarely Indian noodles.

IP i explained that most of the Indian food stalls in Singapore are operated by migrated Singapore Indians. Their eating culture is completely different and they do not cook as spicy food as he has in India. Only in Little India are many restaurants from his state, there he can find all of his foods.

He **ate out more often in India, almost for every meal. In Singapore, he reduced his outside meals and explained:** *"I like my cooking"* and eating out is very expensive in Singapore. Nevertheless, he **eats much more fast food** in Singapore, especially when he stays late in office and his colleagues order fast food, which happens around two to three times per week. He always takes the same fast food: double cheeseburger without meat, French fries and Milo or green tea.

He loves the food his mum cooks, but admitted that he can never cook this food by himself, because *"she is a professional"* and she is already cooking since more than 40 years. The mum has the biggest influence to his nutrition so far. She gave him recipes before moving to Singapore, sends him food with friends and cooks special food for him when he is on home visit.

In India, the main part of a meal was rice. In Singapore, he reduced his rice intake due to the smaller portions in the food courts, but also because he learnt that it is not healthy to eat too much rice. He explained that people in ancient India needed to eat more rice as they worked hard on the fields. Nowadays when many people do sitting jobs the whole day, they do not need so many carbohydrates, hence Indians need to think about their high consume in carbohydrates. Beside the high consume in rice, the Indian diet is *"really healthy"*, from his point of view. He also insists his mother to take less rice and more vegetables.

Another big change for him was the habit **to have water or other drinks together with the food**. In India drinking others than water is not part of the meal. While in Singapore's restaurants, they offer him soft drinks or juices together with food. In the beginning, he was very surprised about this and felt that Singapore is changing to Western traditions concerning this drinking habit.

He keeps religious food traditions like no eating eggs in the month before Deepawali.

Food is very important for IP i: *"Food means everything ... food is really most important."* He said he can survive without Indian food, but it would be difficult as *"surviving is different from pleasing your tongue"*. From the commercial point of view, he gets every Indian food in Singapore. However, there are some dishes, sweets and saviours from his mum, which he really misses. In the beginning, he took chapati and sweets back to Singapore from his home trips. Meanwhile he got used to the Singapore food and imports less food. If friends from India come over for visits, his mother sends some saviours. He tried to offer Indian sweets to his Singaporean colleagues, but they think it they are too sweet and cannot take them.

For grocery shopping IP i goes to Little India, NTUC or Sheng Siong. Mostly he shops once a week on Sundays or Saturdays, because then he gets fresh spinach. Spinach is a very important vegetable for him; he talked very often about it during the interview. He found a big difference in the taste of spinach in Singapore. The Chinese spinach tastes much bitterer than the Indian one. The Indian spinach he can buy in Singapore is from a very good quality: *"(...) in my ...Chennai I can't get these quality leaves until you know some specific person."* He observed that *"Singaporeans and Indians Singaporeans they don't try Indian spinach. Indians don't try Singapore spinach."*

He **tried different kinds of chocolate** in Singapore, but feels they all taste the same, because they all have the same base. While in India the sweets are made by many different bases like e.g. milk or flour. His Indian friends could not understand how he can eat the Western chocolate, as it is too bitter for them.

He gained two to three kg, due to less physical activities for travelling to his office in Singapore. In India, he travelled 1.5 h one way to work in crowded buses. Consequently, he has more time and can rest more in Singapore.

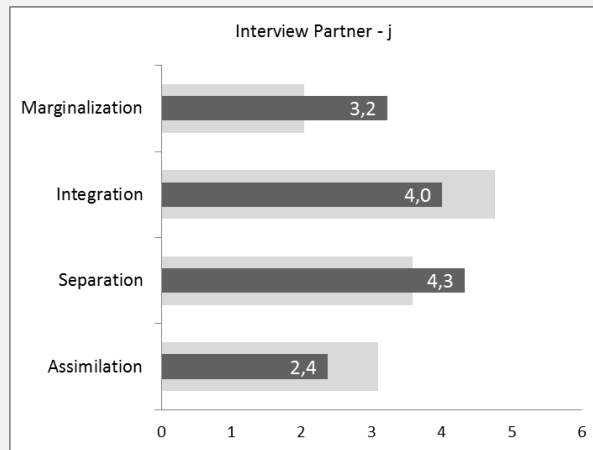
Since he lives in Singapore, he started to research a lot in the internet for recipes. Sometimes he also listens to the BBC health check.

A20. Interview j

"We just eat. [IP laughs.] That's all." (IP j, line 197)

Table A20: Characteristics of IP j (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		male				
Age		35				
Marital status		married				
Housing situation		living together with wife				
Years living in Singapore		3				
Employment		Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• use less spices and less sugar• eating fast food ones per week• likes Mexican food• eats Chinese food• wife cooks less vegetables				
Affecting Factors		<ul style="list-style-type: none">• religion: not eating beef• time and convenience: changed diet overall• availability: cannot cook all Indian dishes• habit: reduced sugar intake and eats less spicy food• taste: does not like all Chinese dishes				
Acculturation Indicators		<ul style="list-style-type: none">• does not like Singapore, plans to move back to India soon• only doing puja at home on festival days• stopped temple visits in Singapore				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	curry puffs, orange juice	8.00 am	bought			x
Lunch	rice with egg curry	12.30 pm	home prepared	x		
Dinner	dosa	9.30 pm	homemade	x		
Snacks	coffee and peanuts	1.00 pm	bought from shop			x

East Asian Acculturation Measure (EAAM)**General information about his life in India**

He grew up in the city of Chennai. After college, he moved to different cities in India for work. Before moving to Singapore, he stayed with his wife near his parents' home. They visited the temple only when his parents asked them to go. His parents are very traditional and celebrate the festivals, while he described himself as not very traditional.

In India, the caste system was never an issue for him. However, he felt that his father ranked people according to the caste system. Meanwhile also his father has changed a lot.

Eating habits in India

His mother was working during his school time, so he used to cook sometimes. That was the time when he learnt cooking. The mother mostly cooked in the morning for breakfast. She prepared two or three vegetables for every meal, as well as idli and dosa. In his family, they eat onion. The parents did not tell him about healthy and unhealthy food, they were both working, so they did not have time for these things.

His father is vegetarian and his mother is non-vegetarian. They did not cook non-vegetarian food at home, but ate it outside. After he started school, he ate more non-veg food as he eats more outside. During his pre-school and college time in India, he very rarely ate outside (besides eating in the school canteen), maybe maximum four to five times during that time. Once he finished his studies, he started to travel and to move to other cities; concurrently he increased his intake of outside food. All of his Indian friends were allowed from his parents to visit him and to eat at his home with him together the same food.

The relocation

He was working for an Indian software company in US for four years, before he worked in Japan one year. After six month working in US, he got married and his wife followed him to US. He moved from US to Singapore instead of moving to India, as the salary in Singapore was higher. Their kids were small by that time, hence they decided to go and explore Singapore for a while. Due to his overseas experience, it was not hard for him to move to Singapore.

Eating habits in Japan and US

He lived in Japan together with friends. There was not much Indian and Western food available. Just sometimes in Tokyo on the street side shops, they found some Indian food. They mostly ended up in cooking. There was an Indian shop, where they got all the Indian ingredients for cooking. For lunch, they mostly packed food from home. He was very thin when he left India and gained weight after he moved to Japan, due to less physical activities and late and content rich dinners.

He feels that he should not eat beef and pork as a Hindu. However, in US/Texas he did not have a car and stayed in a motel where the nearby restaurant had only beef burgers: *"So you end up with eating it."* During the week, they cooked mostly Indian food, sometimes pasta. On weekends, they used to eat outside, mostly Mexican, Italian, Japanese food. He did not go to the temple too often as it was around one hour drive away and he was not much interested in it.

General information about his life in Singapore

Overall, he is not pleased about his life in Singapore. The city is very work-orientated. People at office and outside work are not very friendly. He liked it more to live in Japan. Actually, he plans to move back to India. His wife and children will move next month to Chennai and he will follow as soon as he can. Commonly they travelled to India two times per year.

He used to jog three to four times per week for 30 to 40 minutes, which he stopped four to five month ago due to family reasons.

During the first year in Singapore, they used to go to Little India regularly, but now it is too crowded there and they need to buy only little. They also lost interest in visiting temples. When festivals fall on a weekend, they celebrate a bit by doing a small Puja in the evenings.

Eating habits in Singapore

Food is not of major importance for him. He could easily survive one year or more without Indian food. However, when he lived in other countries, he got a craving for rice after three to four days. Even if he had good Western meals, he felt like missing something. Therefore, after that time he would end up in eating rice. However, food would not be a main reason to move to another country. Last month he went to France for three weeks for work. He did not get rice there, which was ok; he ate all the French foods. The Western and French food is often not fully cooked, especially the vegetables compared to the Indian ones. He feels that this is very much healthier than the Indian way of cooking.

He likes South Indian food, especially cooked from his mother. But as his wife is very busy with the two small children and does not have any help, he is happy with almost every food he can get, just for convenience and time reasons. Because he lives overseas since a few years, he got adapted on some things like using less salt and sugar and not eating too spicy food. He can cook, but he explained that Indian men do not cook after getting married.

They eat bread and jam for **breakfast**, sometimes with egg or ready-made cake, buns or donuts. He drinks orange juice. They do not take any Indian breakfast and he said by the time he left India he hardly had any Indian breakfast. He changed his breakfast habits in Japan already. Three to five days per week, he brings a box for **lunch**. The other days he has lunch outside. They do not cook Indian food regularly in Singapore as they do not have all the ingredients first-hand and the main factor is their lack of time because they are very busy with two children: "(...) *we don't ... you need effort and time to do it.*" In India, somebody will be there to help them and his wife will cook together with his mother. Back in India, they prepared two or three vegetables for every meal, in Singapore they **never thought of cooking more than one due to time reasons**. They even use the ready-made batter for idli and dosa, which his mother never did in India. He underlined, that his diet will change when they move back to India, as they will cook Indian food more regularly and eat more vegetables. Rice with two vegetables, dhal and yoghurt is his favourite meal and at the same time healthy food from his point of view.

On weekdays, they cook vegetarian food at home, on weekends they prepare non-veg food. His wife would not eat non-veg food, she is a vegetarian: "*So traditionally, if you're an Indian you're vegetarian, but with my mother, non-vegetarian. As a father side, you should be vegetarian. In Indian culture, we ... but I'm not vegetarian.*"

After he came back from US, he stopped eating red meat as he has other options now. He prefers to eat chicken and fish, but feels also bad after eating chicken.

In Singapore, they prepare South Indian food only. After their second child was born, it was very tough for them to go to Little India, so they buy their stuff including some spices from the small nearby shop. When they travel to India, they bring most of the spices from his mother and it will last four to five month. Price and freshness are the most important grocery shopping factors for them. They buy their food in Sheng Siong mainly.

While living in India, he ate very spicy food. IP j reduced his intake of spicy food since he lives overseas and **reduced using spices** in their cooking, like chillies: *"We don't use much spices. We got ... so once you got used to that, we stayed outside so long time so, our food spices and all, they're reduced."* If he eats spicy foods during his visits in India, than he feels very hot as he is not used on these foods anymore. They **use less salt and less sugar**. *"Yeah, I've seen it in other countries. Then only you feel why you don't need too much sugar, so we reduced the sugar."* He changed to have his **coffee without sugar** sometimes.

Before their second child was born, they ate out in a restaurant at least once per month, mostly South or North Indian food. Now their last restaurant visit was four or five month ago. Mostly they go to a restaurant and ask them to pack food and eat at home which is easier with the children. However, **every weekend they end up going to McDonald's or any fast food restaurant with the whole family**. It is easier to eat in McDonald's for them with the kids, as most of the McDonald's have kids play areas and his kids like chicken nuggets. IP j admitted: *"I feel really bad"* when he eats fast food. When he eats out for lunch in Singapore, he mostly **takes Chinese food**. He does not like all Chinese dishes but eats their chicken dishes.

They miss a lot of food in Singapore. At first, he misses the food from his mother, as they cannot prepare it in Singapore due to the lack of time. Contrariwise he said, in Singapore they can get Indian food very easily.

He is not very interested in checking for food in the internet, but his wife asks him to check how to cook this and that.

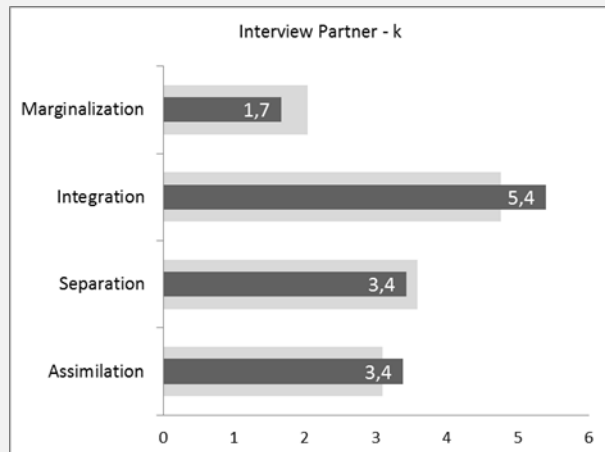
Life situation September 2013: IP j moved back to India.

A21. Interview k

“And whatever vegetables we get in India, the same kind we get to eat here. So I cook it the same way and I eat the same vegetables and whatever food that I used to eat back home. Except that the so called Western food has crept into our diet.”
(IP k, line 31)

Table A21: Characteristics of IP k (source: author’s own)

Socio-demographic data						
State of origin		Mumbai				
Gender		female				
Age		37				
Marital status		married				
Housing situation		living together with husband and children				
Years living in Singapore		11				
Employment		housewife				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">eats out morestarted to eat NIFNIF for breakfasthusband started to eat chicken in Singapore				
Affecting Factors		<ul style="list-style-type: none">mother: learnt cooking and food traditionschildren, husband: like to eat outside, match their tastecaste and religion: taboo of meat, garlic, onionavailability: less vegetarian outside food in SGPtaste: likes Indian and Chinese foodhealth: using ghee for her children, hot and cold food system				
Acculturation Indicators		<ul style="list-style-type: none">likes SGP, but plans to go back when retiredmaintains Indian traditions, including temple visits and celebrating festivals				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	dosa	8.40 am	homemade	x		
Lunch	rice, sambar, vegetables	12.00 pm	homemade	x		
Dinner	puri, cottage cheese (paneer) in tomato gravy	8.00 pm	homemade	x		
Snacks	tea	5.45 am 3.00 pm		x x		

East Asian Acculturation Measure (EAAM)**General information about her life in India**

She and her parents are from Mumbai, her grandparents were born in Tamil Nadu and she said about herself: *"I'm a Tamilian."* She studied for ten years in a Christian convent and is very familiar with the Christian religion, but did not choose to follow it. IP k belongs to the caste Iyengars. They follow and pray to Lord Vishnu. However, she explained, in a city like Mumbai, where people from all 22 states of India live, there was no way to be confined to one's caste. Hence, caste never influenced her daily life. In India, she lived together with her husband before they moved to Singapore.

Eating habits in India

In India, typically they had chapati, idlis or dosas for **breakfast**. Eating Western food was unusual at that time. It is part of her religion that she does not eat garlic and onion in her community, but this has nothing to do with her caste. Root vegetables in general are a defined taboo for Brahmins in South India, because these foods are supposed to be aphrodisiacs. As that eliminates quite a few of the vegetables, she only abstained from cooking onions and garlic. She is vegetarian and does not eat eggs neither pure nor processed e.g. in cakes.

The relocation

With the relocation to Singapore, she left India for the first time. They moved because her husband was transferred in his job. It was painful for her to leave her country, her home and the secure environment. But she feels Singapore is *"pretty much alike in religion and food to a certain extent compared to India"*.

It was difficult for her in the beginning to live in Singapore, but she got used to the place. Her first friends in Singapore were a group of local Chinese women.

They gave birth within six month of each other and were very close and helping each other after the babies were born and she explained: *"I mean I'm very comfortable with Chinese around and I love their food."* Her older son grew up with Chinese kids and met his first Indian friends only at childcare.

General information about her life in Singapore

Her children go to an Indian school. Once per year they travel to India. She said about herself that she is a very traditional person and keeps all her Indian traditions in Singapore. She teaches her children about Hinduism and still goes to the temples on a regular base. Although she enjoys living in Singapore, they plan to move back one day: *"It's home away from home but it's not permanent home."*

Eating habits in Singapore

The whole family enjoys eating: *"My husband and I are foodies. So are my kids in fact."* They eat the same vegetables and in general the same food food in Singapore, which they had in India and she cooks it the same way she did it back home. She does not see much change in her nutrition since living in Singapore except **she started to eat NIF. They also changed breakfast from Indian breakfast to toast and cornflakes.** Rice is a solid component in every meal. For **lunch** and **dinner** they always have rice with dhal and vegetable. Her husband takes food from home for lunch. Maximum once per week they eat Western food like pasta for lunch or dinner and once per month pizza. IP k explained: *"We were vegetarians there and vegetarians here still"*. However, later in the interview she admitted that **her husband started to eat chicken in Singapore. She underlined that he eats it only outside, she does not cook meat for him at home.** IP k and her children are strict vegetarians. The children are not allowed to eat sweets, which contain galantine and they learnt always to ask about the ingredients in an outside dish before they eat. However, they do eat cakes and other foods that contain eggs, but they eat this outside the house. In Singapore, she still keeps onions and garlic as taboo foods.

She learnt the traditional Indian cooking from her mother and still calls her sometimes for recipes or help. Her respect to her mother becomes clearly in the following statement about her home visits: *"(...) when mum serves rice, she has to put ghee and you're not supposed to say no, you cannot say no. It's supposed to be rude to say no."*

She named her mother, but also her children to play an important deciding factor in her way of cooking, because she has changed her cooking style and the kind of food according to her children's' tastes and their health. IP k hopes

that her two sons will learn to cook and continue the tradition in their house, to be aware of the food, that Indian make and eat and associate it with Indian-ness. She wants her kids to eat the traditional Indian sweets on festival days and to grow up knowing to eat that kind of food. She teaches her children in cooking Indian food. Her older son writes recipes by himself and is very interested in cooking.

Most of the time she cooks steamed vegetables or sauté them. For cooking, she uses Indian refined oil. IP k does not cook Chinese food at home, as she does not know how to cook it. Her children get ghee on top of the rice and IP k said she will do so maybe until they are ten to twelve years old. The ghee is supposed to line and coat the intestines and the stomach especially before eating spicy food. In every Indian household, the kids get ghee into their food. Someone told IP k, that ghee is also helping in the development of the brain and she feels that ghee is very healthy, especially for the children. She eats ghee only sometimes and explained at her age ghee is fattening.

She buys her vegetables and fruits once per week at the wet market. The basic spices to prepare handmade masala and sambar powder she purchases from Mustafa.

Her mother and her friends learnt her about the hot and cold food system. She is still follows this system from India, even if it does not have relevance to the climate in Singapore. IP k she will not give yoghurt to her kids on a cold day, because it is cooling, while ginger and dates are heating and cabbage gives a lot of gas to the body. She always cooks cabbage with ginger, to negate the gas production. She cooks fried food only around once or twice a month. Oil and food which includes a lot of oil she finds very unhealthy: *"The only thing I hate is fried food. I really, really don't like fried food."*

She prefers cooking at home and does not like eating outside. Nevertheless, **she eats out more in Singapore than in India**, because her kids and husband like to eat outside, so she joins them. In general, they eat out very rarely only when she is not in the mood to cook maybe once or twice per month. Out of four times eating out, three times they eat Indian food like rice and rotis and once non-Indian food, which is mostly Italian. She explained as they are vegetarians their choices in outside food are very limited even in Singapore. IP k does not think she and her family would ever move to a country, where they would not get Indian food. It would be manageable for her to eat non-Indian food once per week, but not more often than this. They spend every holiday in a serviced apartment to make sure they can cook at least one Indian meal per day.

She is not craving for any kind of food in Singapore. *"Ahhh [short thinking] no, there's nothing I miss. Over the years, I guess I just got used to what is there and what is not there."* [smiling] Her parents bring sweets or snacks from India when they travel to Singapore.

IP k has a Chinese friend who is married to a German and they enjoy to eat raclette with cheese together. There are also a few Chinese dishes she loves to eat: *"I love their bee hoons. I just love their bee hoon."* [smiling happily] Singapore's brown, fried rice is one of her favourite dishes as well and she thinks this is very healthy. From the Chinese way of cooking, she learnt how to make stir fried food at home. IP k celebrates Chinese New Year with her Chinese friends, they eat Chinese food together, sit and talk. She likes the healthy options of Chinese food when they steam cook, but not their deep fried food. In the Malay cuisine there are very less vegetarian and non-greasy options. Hence, she does not eat Malay food. They do not eat fast food as well, because as vegetarians they do not have many options.

When they are sick, they do eat rasam. For every kind of sickness, they have a special kind of rasam that her mother cooked when she was sick as a child. IP k kept this tradition. Rasam is like a comfort food for her and her family and they eat it on a regular base.

They celebrate the Indian festivals in Singapore. It is very important for her to cook her festival food in the traditional way like at home in India and she associates this with memories in her childhood. On festivals, it is a must for her to prepare some sweets at home. Most of these sweets are made from milk. Quite a few of their festival foods are seasonal and depending on the weather, e.g. they prepare heaty food for festivals in cooler December.

As a source to look-up diet and nutrition information, she prefers printed media and also likes to watch Indian cooking shows with her family. IP k stated: *"I've never been a dieting kind of person."* She did not gain weight since living in Singapore and added, that she and her family are not too focused on weight as long as they are all within the BMI.

A22. Interview I

“Ah, I think it's [food] very important. I really worry about my children's, ahm, you know, ah, more than keeping money for them, I really want them to be healthy.” (IP I, line 965)

Table A22: Characteristics of IP I (source: author's own)

Socio-demographic data						
State of origin	Tamil Nadu					
Gender	female					
Age	40					
Marital status	married					
Housing situation	living together with husband and children					
Years living in Singapore	11					
Employment	housewife					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• changed to brown rice and completely uses olive oil.• breakfast sometimes: protein shake with wheat germ and flaxseeds and the fruit and low fat milk.• started to cook lunch at home• eats out less• switched from coffee to tea• started to include quinoa in meals					
Affecting Factors	<ul style="list-style-type: none">• mother, mother-in-law• cultural identity• health• taste					
Acculturation Indicators	<ul style="list-style-type: none">• like SGP, but plans to move back one day• keeps traditions• celebrates festivals					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	tea (masala) idlis	7.30 am 9.00 am	homemade homemade	x x		
Lunch	chapatis, vegetables	1.30 pm	homemade	x		
Dinner	chapatis, vegetables	7.45 pm	homemade	x		
Snacks	tea cookies nuts water	4.00 pm	homemade bought bought	x	x x	
East Asian Acculturation Measure (EAAM) – not filled out						

General information about her life in India

Her family is a middle class family and she grew up in an urban environment in Chennai, together with her big family her grandparents, her parents, her brother and her sister in law. They are Brahmin, but she never felt any influence due to her caste in her life.

Eating habits in India

Her whole family are vegetarian and that is a big requirement of her religion, as Brahmins normally do not eat meat. IP I explained, nowadays it is everyone's own choice. Her brother had meat for some time as he had a peer group who was eating meat, but he ate it only outside of home. Her parents were consent with that, as long as he informed them about it. Other than that, she could not identify any influence of religion to her eating habits. She eats garlic and onion, while her mother-in-law does not eat such kind of foods.

During her childhood, they had only sweets on festival days. She liked the way her family handled sweets and thinks: *"(...) religion was organized in a very nice way where normally you eat healthy food ... but during festivals, you indulge a bit."* In India, she had 95% South Indian food, sometimes her mum cooked something North Indian like chapati or a side dish. When she was a child, her protein source was dhal. They used a lot of coconut oil, red beans and chickpeas for cooking. Oil was expensive at that time, so her mum made deep fried food only once per month, it was a delicacy. There was no fast food in India when she left. They ate out in Indian restaurants exclusively.

Her parents never had a problem to allow her friends from other castes or religions to enter the kitchen. Her father was more worried about the hygiene of persons than about caste. He would never eat food cooked by their service maid who lived in the slums, as he worried about her hygiene.

Eating habits in Zurich & US

Before moving to Singapore, she lived with her husband in Zurich for five years and before that, they stayed in US.

In US, she always took the XL size soft drinks and explained: *"Hey, for 50 cents I'm getting [IP laughs] a double this, you know, that typical ... because you ... you come from a country that everything is scaled."* Later she realized that it is not healthy, but at that time, it was so special for her.

Things like cheese and bread were not easily available at this time in India: *"But then you, in these developed countries, there's so much access to food. It's so cheap, especially in the US. My god, you know, it was a typical ... I came from*

India, right, so it was a typical mentality of, you know, I have to maximize my dollar." She stated to have a weight problem since she got married: *"(...) the lifestyle was very different. The weight gain ... the weight gain came in these developed countries ... because of, ah, access to rich food and lack of exercise."* She termed her diet change in Zurich as *"quite dramatic"*. She had a lot of chocolate and Italian food and started to cook pasta and pizza at home. In Switzerland, she was working for a Bank and on weekdays, she had **lunch** in the canteen. Her favourite canteen lunch was Bircher Muesli, because it was filling and had a lot of fruits and yoghurt. Other than that, she went to the supermarket and bought warm food there, like vegetarian pasta, fruits, vegetable salad or vegetarian soup. She started eating a lot of Italian food in Switzerland because it was easy to prepare compared to Indian food. For pizza, they bought the ready-made dough, rolled it and put some toppings. She called the pizza *"Indianized"* as she used some Indian toppings like green chilli.

During the weekends, she cooked dhal, which she prepared for the weekdays evenings. Five days per week, they had Indian **dinner**, two days non-Indian food. In Switzerland, she mainly cooked Indian food, sometimes Italian or Mexican wraps with salsa and cheddar. Sometimes they went out for eating on weekends, than they mostly had Italian food. They never had fast food there.

In Zurich, there was a small Indian shop with Indian groceries and other Indian stuff. There was a small Indian community as well, including mostly Sri Lankan Tamils. She always took food from India or when somebody was there for visit they brought food e.g. Masala, as it was cheaper.

The relocation

They moved from Switzerland to Singapore because they wanted to live closer to their home and it was getting too boring in Switzerland as all things were for German-speaking people. Leaving India when moving to the US was ok for her because she knew it was going to be exciting and something new.

General information about her life in Singapore

She likes Singapore. *"It's ... we all jokingly say it's ... it's one of the nicest suburbs of India."* [IP laughs.] She admitted: *"(...) it is a Western country at the same time with Asian values"* and she could imagine to stay in there forever.

They travel to India every year; it is just a four hours flight. Both of her children were born in Singapore. They are visiting an Indian school, but there is no religious education at school. Most of her friends in Singapore are Indians. She places a high value on keeping her traditions and passing them to her children. To her, Hinduism is a way of living, a way of eating, of respecting nature, it does

not insist on idol worship. She usually prays every day, but her guru told her that god is not going to punish her if she is not praying or lighting the lamp daily. They teach their children to pray at least five minutes per day. Her children are attending Hinduism classes once per week and she makes it a point to introduce them to Hinduism, to their mythology, history and praying. Her children like their religion. They do not go to India for festivals due to school holidays of kids. Instead, they celebrate Indian festivals in Singapore in a big way with friends and prepare special festival food.

Eating habits in Singapore

Her eating habits did not change much since she lives in Singapore. Her daughter was born soon after they moved to Singapore. She was breastfeeding the girl so her nutrition changed because *"(...) in our culture, there's a lot of emphasis on what a woman should eat when she is breastfeeding ..."* and certain foods are banned. During her confinement time, her mother and her mother-in-law stayed with her and gave her all the typical Indian confinement food. She used to listen to them, but doubted if everything they said was right.

After the baby was born, she stopped working and **started to cook lunch at home**. Since they live in Singapore, they have a helper from Sri Lanka. In Zurich, she drank a lot of coffee. During pregnancy, she stopped drinking coffee and **switched to masala chai tea with cardamom**.

Keeping herself and the family healthy is a big issue for her and her family's daily diet: *"I really worry about my children's, ahmm, you know, ah, more than keeping money for them, I really want them to be healthy."* She does not expect from her children that they will take care of her and her husband when they are old, so it is most important for her to stay healthy.

She is not happy about all the sweets and junk food that her children eat and she would prefer them to have the simple food her mother cooked for her when she was small. Friends and her homeopath told IP I that there are many chemicals going to her body, many more than when she was a child. To make sure that her children are not infused with chemicals too much she buys organic food like apple juice, soya milk, whole milk and organic fruits.

When her children were smaller, she tried to get as many information about healthy food as she could, because the kids did not like to eat dhal and rice every day. Most of the changes in her and her family's diet she did in the last years she learnt from her own reading. She would appreciate it if her children stay vegetarian and said she would try that as much as she can: *"(...) as parents we ... we give our values. And if we don't make the effort, you know ..."*

so tomorrow then somebody might come and tell them it's okay to smoke ..." They have already asked, why they are not allowed to eat meat, like their friends and were wondering if their friends might do something wrong.

She would not have married a meat eater, as she cannot deal with it, first due to religion and: *"I have a problem with something being killed for someone else's pleasure, you know."* It would be all right for her if someone eats meat in her house, but she just does not want it to be cooked in her kitchen, as she cannot stay the smell of it. Also in a restaurant she is fine if her friends eat meat and stated that she would not make her friendships based on meat-eating or not. However, she would not eat from their plate. **IP I never used the word MEAT, instead of she used to say like: "We don't eat ..."**

As she grew up in a traditional Brahmin house, they never ate eggs at her parents' home. In Singapore, she **started to prepare and eat eggs at home** for herself and her family. It is an important protein source for them. As they are vegetarians, she is worrying about their protein intake. A nutritionist told her to put quinoa seeds in the rice, fruits and vegetables, IP I explained: *"(...) it is supposed to have the highest protein content in the world"*.

They include a couple of small spoon ghee to the children's hot rice every day. Her mother did this already, but IP I cannot remember the reason for it. They visited a very famous Maharishi ashram in Salzburg and there they highly recommended them to include ghee in their diet. The discussion about high cholesterol due to ghee did not stop her from this habit. Only the children get it, because they burn it a lot more than the adults do, as they run around and play. Ghee is supposed to add flavour and taste to the food as well.

They **cook at home every day**; her helper is doing almost all the cooking: *"(...) she (her helper) makes very good food."* In addition, IP I and her mother taught the helper some Indian cooking. Her mother never got a chance to learn IP I cooking as she left home immediately after getting married and before she studied and did not live at home. The mother teaches her now especially how to cook for children and how to make food palatable for kids whenever she is in Singapore. Her mother had a big influence to her nutrition and she learnt a few things from her mother-in law who is also a good cook. Hygiene is very important for her in her kitchen, while she does not care about caste when it comes to food.

For **breakfast** on most mornings, she takes **a protein shake with wheat germ and flaxseeds, fruit and low fat milk**. From an internet chat, she learnt that this protein shake keeps her full and hence helps her to lose weight. Sometimes

she has a sandwich for breakfast. Her children eat cereals for breakfast. Normally they have the same food for **lunch** and **dinner** just with one variation, so her helper does not need to cook very often, only if something runs out, e.g. a vegetable, than they cook one more. Mostly they have rice for lunch, sometimes chapati. For health reasons she also **changed to brown rice and completely uses olive oil**. To make sure she cooks healthy they prepare food, which is not too oily, use less salt and make food not too sweet. Healthy food should be organic and homemade. They try to avoid deep fried things and big desserts. For lunch and dinner, they have 40% to 50% South Indian, about 30% North Indian and 20% other food like Italian or Mexican. When she is alone she has sometimes just pasta for lunch.

The whole family loves Italian food like pasta and pizza and the children start to complain when they get rice for two days in a row. When her parents are in Singapore, they cook Indian food for them. IP I reads cookbooks and searches in the internet for recipes. For drinks, she takes two litres of water per day and never drinks alcohol.

Normally they do not eat lunch or dinner before going to the temple.

She is **eats out less** compared to Zürich, three to four times per month, mostly with friends. Her husband travels a lot and prefers to eat at home. She tried Thai food, Mexican food, and Italian food and sometimes Indian - Chinese food, but she never ate Malay food. She does not like the *"hardcore Chinese"* food too much as most of the vegetarian choices are soya based, which she does not like. In addition, she does not like the smell of Chinese food.

Her children sometimes eat fast food when they go to birthday parties, which she does not like but says she cannot influence other parents. As a family, they have not visited a McDonald's since years.

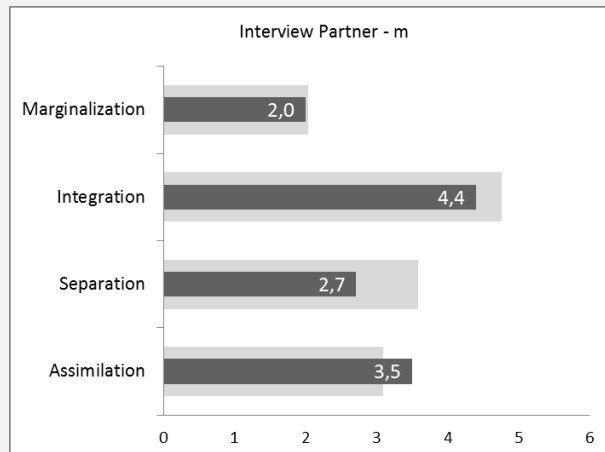
For her all Indian foods are available in Singapore *"Mustafa has everything under the sun"*, even more than what they get in India. The only food she misses is Bircher Muesli as it was her favourite food in Switzerland. When buying groceries the most important factor is the quality and she always looks for organic and wholemeal stuff, therefore, she also would pay more **"But I look at it as ... as a long-term investment into, like, good health, you know."** 80% of grocery shopping is done by her helper, 20% by IP I. Her helper buys fruits and vegetables once in two weeks from Tekka market in Little India. Sometimes they go to Mustafa for Indian foodstuff. While the regular stuff like milk and cheese they buy from Cold Storage.

A23. Interview m

"So I think Tamilians, we believe ... that what we consume is very important especially because we all ... Hindus, we treat body as the temple where the ... spirit is living" (IP m, line 394)

Table A23: Characteristics of IP m (source: author's own)

Socio-demographic data						
State of origin	Tamil Nadu					
Gender	female					
Age	47					
Marital status	married					
Housing situation	living together with husband and children					
Years living in Singapore	20					
Employment	writer					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• less changes• one meal per day just with fruits.• prepares rarely NIF• used to eat pizza till some years ago					
Affecting Factors	<ul style="list-style-type: none">• husband and children: ask her to cook North Indian food and proper dinner• sister: learnt her to cook Italian food• cast: vegetarian• health: rarely eating out side, high calories in SGP food, eats lot of fruits, reduced cheese intake, stopped eating pizza• trust: never ate in food courts and hawker centres					
Acculturation Indicators	<ul style="list-style-type: none">• likes SGP, not decided how long to stay• visits temples sometimes• preparing sweets for festivals for children's sake					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	brown whole meal bread with strawberry jam	8.30 am	homemade		x	
Lunch	watermelon	2.00 pm	fresh			
Dinner	chapatis, chickpeas, curry	5.30 pm	homemade	x		
Snacks	water					

East Asian Acculturation Measure (EAAM)**General information about her life in India**

She was born in Tamil Nadu, but due to her father's job, she moved to different places within India with her family during her childhood. IP m always felt the pain of leaving her friends, so she could never really enjoy the places she stayed at. She has two brothers and one sister, one brother is living together with her mother. Her sister is living and working in London. Their grandmother had 13 children. The family belongs to the Brahmins caste.

Eating habits in India

Her grandmother became a widow when she was 23 and after that, she was not allowed to eat garlic, because it induces sexual urge. Not only widows were denied to eat garlic and onion, also men and especially Brahmins, but her parents' generation is eating it.

She had idli for **breakfast**. All daily meals in India include ghee and are heavy. The majority of the population are not aware of the harms it can bring; only in metropolitan cities, people are slowly getting aware. Very rarely, they ate outside in proper restaurants and they never had fast food.

She was the eldest child and used to help her mother a lot in the kitchen, she started to learn cooking when she was twelve. In her parents' house all peoples from all religions and castes were allowed to come in. While in her grandparents' home, people from lower castes were not allowed to share the dining table with them. IP m explained one more generation before lower caste people would not even have been allowed to enter the house.

The relocation

They moved to Singapore because her husband got a job there, her son was 2.5 years and she was not working at that time. Even if she moved with her parents many times in India, at first it was an uncomfortable feeling for her *"to go out of ... our own country"*. After a while, they got a big circle of Indian friends and started to like their life in Singapore.

General information about her life in Singapore

She enjoys her life in Singapore as it has much in common with India, especially cultural-wise and the climate is almost the same. Around once per month she goes to Little India.

In the beginning, she was fascinated by the libraries in Singapore and read a lot, after some years she started to write her own essays about the Chinese culture, Chinese poetry and the status of Chinese women in Singapore. She said she owes her ability to write to the Singapore libraries. IP m can converse in Chinese and understands the language quite well, but cannot read it. For many years, she wrote her essays in Tamil, now she is thinking of writing in English.

Her younger son was born in Singapore and he calls the country his home. Therefore, she and her husband plan to stay in Singapore at least till her younger son graduates. She travels to India once in two years. Her children have no bonding to India and are not interested in going there. When she travels to India her mother and the relatives are cooking a lot of food for her, especially fried food.

IP m does believe in god and in religion, but is not following the rituals, although she knows them. She thinks one reason for this is that her parents also were not very traditional and religious and they never insisted her to pray or to go to a temple, although there were a few must rituals in her family. About her children, she explained: *"They do know some amount of Hinduism [smiling embarrassed] though not much."* They are not as strict in religion as their father is. Mostly she goes to the temple with her younger son, but they do not go on special days and she stated to like the temples when they are deserted.

Eating habits in Singapore

About her eating habits in Singapore she explained: *"I'm born Hindu and a Brahmin ... I [short thinking] I'm a vegetarian. That, I have not changed a pure vegetarian. I've never tasted eggs also."* She explained her eating habits did not change much since she lives in Singapore, except that she **has to be more**

careful there, as the caloric value in all food items is higher in Singapore. When she stays in India for holidays, she consumes heavy meals all days and many fried items but she still loses weight during this time. Hence, she believes the food in Singapore has more calories, even if she says with no doubt it is more nutritive.

She does not care if someone sitting beside her is eating meat, but explained: *"What ... and the problem comes when I have to eat in a group, a party where, ahm, almost all the dishes are mh ... seafood or ah meat or ... you know, those kind which I don't take. So, I ... I ... most of the times, such parties, I will be taking the ... straight away, I go to the fruits ..."* She feels this looks a bit odd, but her close friends would understand her behaviour.

Over the years in Singapore, she came up with her own diet that includes **one meal just with fruits**. She takes brunch for **breakfast**. After drinking 900 ml water in the morning, she waits for one hour and then takes anything she wants. Water is her only drink and beside the water for breakfast, she has four to five glasses in addition per day. Her children just grabbed a sandwich and ate it on their way to school; they did not want to sit down for breakfast. Her husband eats bread or cornflakes in the morning. He changed to this kind of breakfast as he feels it is lighter food compared to eating idli or dosa. She cooks **lunch** every morning mostly for her younger son and herself and packs lunch for her elder son. In the beginning, it was hard for her husband to get vegetarian food in the canteen, so she also packed lunch for him. Meanwhile he got used to the food in Singapore and takes lunch from home half of the week.

They eat a lot of greens and fresh vegetables. She prepares more North Indian food, because the whole family likes North Indian food like chapati and also side dishes and curry from north India more than South Indian dishes. They also eat cheese, but she tries to avoid it, because she feels it has high calorie.

Slowly over the years, she developed her own recipes and said: *"I think lifelong we can experiment."* If everyone in the family likes it, she sticks to it. She spends a lot of time in the kitchen: *"So I'm always on a laptop or on kitchen."* Her sister, who is living in London, taught her how to cook macaroni and pasta in a few different ways, e.g. to make it spicy or with pepper spice and a few vegetables. IP m loved one or two of the dishes, the other ones had too many cheese. Her sister is more exploring and experimenting in cooking NIF, while IP m prefers to cook more Indian food, just **limited she makes some noodles**.

Since several years, she eats just fruits for **dinner** as much as she wants on four to five days a week. Fruits are very healthy from her point of view and she

explained eating many fruits helps in bowel clearing and clear toxins. About her health, she stated: *"I ... I should be happy. I am a healthy person. I didn't go to the doctor much."* She tried to persuade her husband and her sons to eat fruits for dinner as well, but they did not follow her suggestions. Therefore, for them mostly she cooks chapati for dinner.

IP m eats out maximum once per month in Indian vegetarian restaurants and stated to be scared about the fried food in food courts and hawker centres because they reheat the food all the time there and in 20 years she has never eaten there. She was never fascinated by McDonald's or any other fast food and never tasted it. While her younger son likes fast food like pizza, garlic bread, french fries and cheeseburger without meat. Five to six years ago, she used to have cravings for pizza from Pizza Hut and Veggie Lovers, but now she stopped eating it because of the white flavour and the cheese inside. She also likes chocolate, but she has to be very careful not to get too many calories.

The Indian cuisine, especially the North Indian food, is still her favourite because she is more exposed to it and she believes, if she would be exposed to various other kinds of food, she would like one or two other (non-Indian) foods also, but her tongue is used to Indian food. She compares the situation with people who always read one genre of books because they are not exposed to other kinds of books. Living without Indian food would be fine for her for one week. For longer, she would start to explore which things are available and how she could prepare them to her taste.

In Singapore Kash Kash (poppy seeds) is not allowed. It gives a gravy and a good flavour and also has some nutritious value. However, after a while, she was used to cook without Kash Kash and she said, in general, everything is available in Singapore. Quality is her most important aspect when buying food. She started to order food online 13 years ago and also gets her spices from there. Every weekend her husband buys fresh vegetables at the market and stores them. Certain things, which the online shop does not have she buys sometimes from Mustafa.

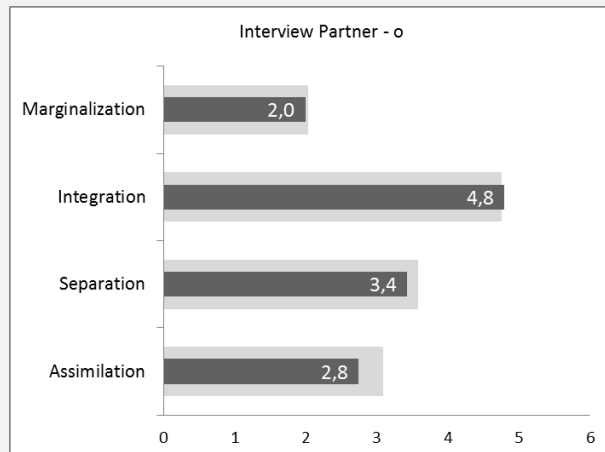
Food is very important for her, which she thinks is based on her roots as a Tamilian. She is celebrating the festivals at home because of her children. IP m prepares one or two sweets and when friends are calling, she will go there; but she is not celebrating in a grand way, as she is personally not very interested in celebrating the festivals and does not believe in rituals. She does not fast but practices fruit days. IP m does not read special books about nutrition, but says certain things she avoids in cooking without realizing it.

A24. Interview o

“(…) the whole thing is about the same, but there are small things that we have changed” (IP o, line 586)

Table A24: Characteristics of IP o (source: author’s own)

Socio-demographic data						
State of origin		Karnataka				
Gender		female				
Age		38				
Marital status		married				
Housing situation		living together with husband and children				
Years living in Singapore		15				
Employment		freelancer with designing company				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• more salads• started to eat garlic• children eat meat• substitute rice with wheat as often as possible• use less coconut for cooking• changed from peanut oil to olive oil• tries to include non-India vegetables in her cooking, e.g. broccoli, Chinese spinach, celery• less sweet and deep fried food as celebrating less festivals• NIF for breakfast on weekdays				
Affecting Factors		<ul style="list-style-type: none">• mother: stilling following her recipes• cooks Mexican foods with friends• health: eats garlic even if it is not allowed from caste, reduced carbohydrates• taste: does not like Chinese food, but Mexican and Italian food• children and husband: cooks to match their tastes				
Acculturation Indicators		<ul style="list-style-type: none">• likes SGP, not decided yet about future plans• going to temples not on regular base• celebrating festivals to lower extent				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	cereals	8.30 am	home		x	
Lunch	red rice, curry, cabbage stir fried, yoghurt	1.15 pm	home	x		
Dinner	chapati, cabbage stir fry, salad, yoghurt	8.15 pm	homemade	x		
Snacks	pear		homemade	x		

East Asian Acculturation Measure (EAAM)**General information about her life in India**

She was brought up in Bangalore, where she lived with her parents until she moved to Singapore. Her brother stays in Canada. In India, they were not visiting temples on a regular base; mostly they went there for festivals.

Eating habits in India

Everybody in her family is vegetarian. She explains in Hinduism people are not supposed to eat meat, but she is a vegetarian by her own choice and never tried to eat meat. They had a **breakfast** menu in India that included dosa and idli. Eating out in India in 1995 was something very special, which they rarely did. Her parents preferred to cook and have Indian food at home and ate non-Indian food only occasionally. In India, they used to cook vegetables more soft and used much more coconut oil. Every day her family needed one coconut for cooking. The common oil for cooking was peanut oil. A lot of sweet and deep fried food was eaten for the festivals. They used home remedies, e.g. turmeric that heals up inside wounds. So the first run when they were sick they tried with home remedies, if this did not work they went to the doctor.

The relocation

Her husband was already working in Singapore when they got married. She finished her studies and then followed him. It was the first time she left India and initially it was a bit hard for her. However, she found many things to do by herself and she likes the independency that she has in Singapore.

General information about her life in Singapore

She lives together with her husband and her two children in a condominium. They have a maid working for them. Both of her children were born in

Singapore. Once in one to two years they travel to India for three to four weeks and stay with her parents-in-law than. Sometimes her parents or in-laws are visiting them in Singapore. She enjoys having the Indian and the Western culture in Singapore. The children are still exposed to the Indian culture and learn where their parents are from and what their religion means. Their future length of stay in Singapore depends on the well-being of their children and how they adapt to the Singaporean system.

She explained that as a traditional Hindu, she has to pray every day, but she stopped that. They go to the temple and pray when they feel like going, *"that's why I'm telling I'm like half modern and half ..."*. They follow four major festivals in Singapore: Deepavali, Ganesh festival, harvesting festival and their New Year called Yugadi. Her children grew up the *"local way"* which is a big change compared to the way she have been brought up. They keep their children in touch with the Indian culture by buying them comics about Indian myths, introducing them to the wedding traditions and following some traditions. However, they could not follow some traditions like the ceremony for the first haircut at the child's first birthday. Because it is too hot in Singapore, they could not allow the hair to grow for one year. Some traditions they needed to change, like feeding the first solid food that has to be done by the baby's uncle. They did this in Singapore when her son was two month old because her brother, who lives in Canada, was in town during that time, so he gave the baby some rice and pudding. She continued feeding solid food, when the baby was four month as the doctor recommended.

Eating habits in Singapore

Overall there are not many changes in their nutrition since living in Singapore, they just modified it a bit to make it healthier and have some add-ons like different kinds of salads. IP o feels that there is an imbalance in Indian nutrition, as the physical work has been reduced during the last years while they have the same food habits. Because of this imbalance, they are slowly trying to change whatever they can to eat a healthy diet. She thinks in India they probably would have made the same changes, but it would have been harder due to the traditions: *"Ah, because you have a festival every now and then, so you need to make something special. So you end up making something, like, you know, a sweet or a deep fried something which has been fried in oil more often."* People of her caste and family do not eat garlic. However, she thinks garlic is healthy. Even if they are not used to the smell and taste of garlic, she tries to use it in cooking whenever it matches with the taste e.g. in pastas or other Italian food.

Indian **breakfast** including dosa and idli with coconut chutney became a weekend special for them that they eat once or twice per week. On weekdays, the family eats cereals, oats with buttermilk or toasted bread. For **lunch** she mostly cooks Indian food. Around once a week, if the kids want something different, she makes pasta or sandwiches. The children eat lunch at home and go to school afterwards. Her husband eats out for lunch different varieties of cuisines or packs a whole-wheat sandwich and yoghurt, or salads from home. For **dinner** they cook in the morning, heat the food up in the evening and add on some salads or chapati. They also **substituted rice with wheat** because they have a history of Diabetes in the family. Therefore, out of 14 meals per week she says she eats four meals with rice. She uses **less coconut** in her cooking and substituted peanut oil with **olive oil**. **Lentils** are a must in every day food as it is their main protein source. They eat homemade **yoghurt** for every lunch and dinner and consume a lot of milk as their calcium supplement. In addition, **vegetables** are on their daily menu. She tries to include vegetables that are not very common in India into her Indian recipes. One of her results is that the taste of Chinese spinach does not go along with Indian cooking. IP o tried to make a curry out of it and mixed it with spices, but the taste is contradicting. Also celery is totally contradicting on the taste in the Indian cooking. While broccoli, which is not common in India, turned out well in certain dishes, so they *“put it on our list”*. For the Indian vegetables, she keeps on cooking them until they are soft.

She learnt cooking from her mum and named her mother as the person who has the biggest influence to her nutrition. Actually, she cooks her mum's recipes and also gets new recipes from TV cooking shows, food blogs in the internet (e.g. Jamie Oliver recipes) and cookbooks or gets inspired from meals she had in a restaurant. They like to experiment in cooking and if it is something, the kids like, than they do it on regular base. She kept the Indian tradition to give her children ghee every day mixed with food and IP o explained, it is cool and compensates the hot chilli they use for cooking. Ghee is also used for seasonings. She mixes her own spices or gets it from her mum or mother-in-law. They do not use the spices from the supermarket due to its different taste. IP o is vegetarian but takes eggs sometimes, even not on regular base as she feels to gain weight from eggs. Her children started to eat meat outside home: *“Ah, we have given them a choice, basically. They [her children] do eat meat.”* They also eat eggs and her husband can try one bit of meat but not more.

IP o cooks different festival foods: For New Year a bitter (e.g. neem) and a sweet dish: *“So we have that representing the sweetness and bitterness in our life. We have to take both of them.”* For harvest festival, she prepares lot of oily

and sweet food with high calorie. In India, it was important to be prepared for winter season. For the Ganesh festival, they have lots of fried and sweet stuff. During her confinement, her mum came to Singapore and learnt her about confinement food. She followed the Indian confinement rules 50 percent, but could not eat food that was supposed to make the body hot e.g. turmeric, because it was already very hot in Singapore.

IP o explained that she could live without Indian food for a week. When they come back from long trips, her whole family looks forward to eat rasam: *"That's like soul food for us."* She stated it is very relaxing and soothing, and even if it is a *"simple meal"* for them *"(...) it is like peace"*. The children like fast food, but it are like a treat for them, once per month they are allowed to have it. When she left India in 1995, there was no McDonald's there. Therefore, she had fast food in Singapore for the first time and she liked the apple pies and French fries and had it a lot. Due to this, she **gained a lot of weight during her first year in Singapore**. After a while, she realized that it is *"really not good"*. **Nowadays she is not very fond about fast food** and said, as vegetarian, she does not have many choices there.

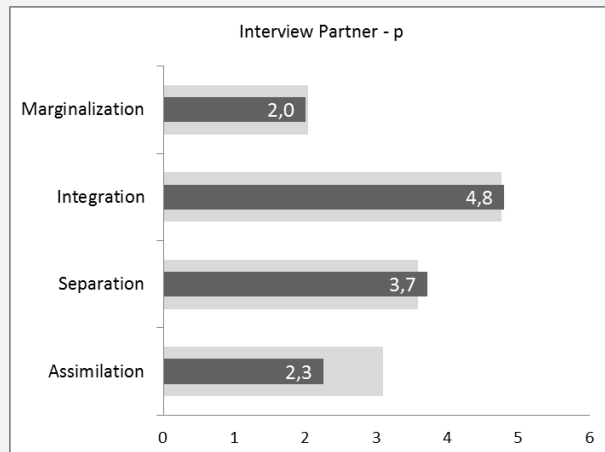
On weekends, her husband wants to eat home cooked food, while she is tired of it and likes to eat out. They eat out more compared to her time in India. **At least once per week mostly for dinner** they eat out and **they try all the cuisines wherever they can**. She likes Italian and Mexican food, especially quesadilla. She can eat Chinese vegetarian occasionally and explained: *"It's again basically the taste buds probably"*, their seasonings are different from the Indian ones. She enjoys cooking Mexican food or Indian food from other regions with her Indian friends from time to time. In general, she takes a lot of awareness to the eating favourites of her family: *"When you are living with the family ... you have to try and balance out everybody's needs."* Sometimes she is cooking two different things, if she feels the children need to have something special and they have different tastes. She does not really miss any food from India as everything is available in Singapore, except the poppy seeds, which are not allowed in Singapore. When choosing her groceries she *"(...) look at it and feel it and buy that"*. The main food she buys from an Indian online store, like milk, rice, lentils. For fresh vegetables, she goes to Little India once per month. They last two weeks, than another two weeks she buys vegetables from NTUC. Overall, she declared fast food is not good, also peanut oil and too much rice as *"unhealthy"*. While lentils, vegetables and yogurt are a must every day. IP o feels that her daily home cooked food is *"quite healthy"* as they modified it a bit from *"what we do in India."*

A25. Interview p

"I am not so ... not so special about ah, ah food. I ... when I'm hungry, I need something to eat. And normally I found most of the things are eatable for me ... I'm not so special." (IP p, line 314)

Table A25: Characteristics of IP p (source: author's own)

Socio-demographic data						
State of origin	Kerala					
Gender	male					
Age	29					
Marital status	married					
Housing situation	living with Indian flat mates					
Years living in Singapore	3					
Employment	Software -Engineer					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• more fruits• increased meat intake• increased NIF• changed to prepare his tea and coffee with sachets• increased fast food intake• NIF for breakfast• mostly cooks dinner					
Affecting Factors	<ul style="list-style-type: none">• mother: asks her for recipes, no restrictions• wife: cooks mainly Indian food, more fish than meat• religion: fasting habits, meat eating• availability: import food from India, more fast food, more meat, hard to fast, cooks dinner• taste: more NIF• time & convenience: NIF for breakfast					
Acculturation Indicators	<ul style="list-style-type: none">• SGP has pros and cons, no plans to stay forever• visiting church on regular base• does not celebrate catholic festivals					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	bread + jam	9.00 am	home		x	
Lunch	typical Singapore lunch: rice + 1-2 non veg + 1-2 veg	12.00 - 12.30 pm	food court			x
Dinner	rice + curry + veg / non veg	10.00 pm	home cooked	x		
Snacks	juice/ ice lemon tea tea water		outside, can Indian style	x x	x	

East Asian Acculturation Measure (EAAM)**General information about his life in India**

IP p comes from a village in the high lands of Kerala. His father is cultivating different kinds of spices, like cinnamon, pepper and cardamom. He has one brother who works as an engineer and one sister who lives with her family in Sydney. Since his high school time he is separated from his family. Before moving to Singapore, he worked in Bangalore, which is an overnight journey away from his home. He lived there together with friends and travelled home once in two month or his parents used to visit him. His father does many sports and introduced his kids to it. IP p said this is not typical in India, as 90% of Indians do not practice any sports. He is a Christian, his family goes to church on weekends since generations, and they are taught not to miss this habit - even if he says that he is less strict on that, compared to his parents. Traditionally they pray every evening at home.

Eating habits in India

In his society, most families are middle class families, who consume a lot of food. He explained that **consuming more food is a question of financial status**. His whole family are non-vegetarians. During his childhood the butcher shops were only open on Sundays, so a family bought one to two kilogram meat and prepared that for the whole week, a fridge was not common at that time, hence they dried the meat. Nowadays meat is available there every day. As a child, he ate a lot of ghee, which his mother gave him and he loved it. They have several fruit trees in their garden like mango trees, papaya trees, jackfruit trees and passion fruit trees. However, in his family, it was not very common to eat fruits on a daily base. His wife's family is very strict in having fruits daily. Compared to other regions of India they use a lot of fish in their cooking. For drinking, he had lime juice with soda once or twice per day.

His parents always preferred to have food at home; they are not keen about eating out. Only during travelling, they had outside food. Even nowadays, when he wants to invite them to a restaurant, they prefer eating at home. When IP p lived in Bangalore, he had Indian **breakfast** at the canteen, which was a heavy meal. They ate out of the canteen for **lunch** most days, as they did not like the Karnataka canteen food, which was exclusively vegetarian. For lunch, he had two to three vegetarian dishes, one to two non-vegetarian dishes, rice, curries, a non-curry item, yoghurt preparation and sambar. For **dinner** he went to a nearby Kerala style restaurant where he ate most of the time vegetarian food. Later they got a housemaid, who cooked non-vegetarian dinner for them. NIF was not very common in India, he just tried some Indian Chinese and some Western food and they ate some food from other regions of India. He did not eat fast food from branded places like Pizza Hut or a burger place very often, but they used to have fried chicken and other Indian fast food. Nowadays McDonald's and KFC are coming up more and more in India.

They have a 50 days fasting before Easter and 25 days before Christmas. During that time, they practice a vegetarian diet.

The relocation

He planned to move to Singapore, work part time, and do his masters. But he ended up in full time working. In-between he got married and priorities changed and now he just continues working full - time in Singapore.

When IP p moved to Singapore, it was not the first time he left India. He has been for short trips less than three month to a few European countries like Germany, Netherlands, Malta, Belgium and France before. It was not so difficult for him to leave India, as he did not live together with his family since high school, so he explained that it was a "*gradual separation*".

General information about his life in Singapore

IP p got married when he already lived in Singapore. He had an arranged marriage and explained that his own and his wife's likes concerning food are similar because the two families share the same food traditions. Traditionally women stop working after getting married to take care of the family as his wife does. She stayed in India with her parents at time of the interview as she expected her first baby soon. She will come back when the baby is 2 to 3 month old. Some Indian Hindu friends stay with him in his flat until his wife comes back.

About Singapore, he stated the country has a lot of positives and its negatives like any other country of the world. He feels somewhat locked up as the country

is so small and life is restricted which he is not used to and which is a bit frustrating for him. Otherwise, it is a secured country, less polluted, and less crowded. He enjoys all the sports facilities around the houses. In addition, IP p likes to have food from all parts of Asia. However, if he gets a chance he would prefer to live in a landed house with his own surroundings like back in his childhood.

Concerning religion, he mentioned: *"I'm quite serious about religion."* He visits the church every Sunday and explained his parents would be very disappointed if he would skip this. There are some churches in Singapore, which do the services in his mother tongue Malayalam. His wife is more stringent on religious things, but as she is not in Singapore now he sometimes skips the traditional evening praying, as he is too lazy.

Eating habits in Singapore

In general, he did not find a big difference in food in Singapore compared to India, because he eats non-vegetarian food and does not have many restrictions concerning food. In outside food he notices that in India the main food on a plate will be rice and five to six bowls with different varieties of food and more vegetables. While in Singapore, the variety is less and the habit is to eat two meats and one vegetable. The food in India is spicier and they have a bigger variety of vegetarian food. Another point is that the food in Singapore is sometimes not fully cooked which he is not used to and tries to avoid. Furthermore, he **started to eat more fruits, due to a higher variety in Singapore**. He eats meat for every meal in Singapore. As a Christian, he does not belong to any caste and hence he is allowed to eat any kind of meat and explained: *"I think Christians are more, more ah towards non-vegetarian food. And Hinduism is more about more promoting vegetarian."* He was taught that *"(...) everything is created from God for mankind - as man is a superior creation,"* so he did not find it too difficult to kill animals. Nevertheless, sometimes he realizes that the animals also have pain, IP p admitted: *"But since I'm used to it from my childhood, [IP laughing] I cannot avoid also ... finding very difficult to get rid, get rid of it."* Nowadays he tries to reduce his meat consume because *"we cannot feed the whole world with meat"* and due to the high carbon dioxide emission caused by cattle. IP p thinks vegetarians have more sense to differentiate food; therefore, they have difficulties to tolerate the food in Singapore as it does not have exactly the same taste like in India.

When his wife is in Singapore she mostly prepares Indian **breakfast**, only when she is late to wake up she quickly prepares some bread. On most days, she packed **lunch** for him; sometimes he went home for lunch as he lived close by.

She also cooked **dinner**. Her cooking is not as good as the food from his mother or mother-in-law, but he admits his wife is improving. Before he got married and now since his wife is in India he has **bread and cereals for breakfast**: *"I think the situation is, is changing the habits."* It is more convenient as he wants to rush to the office, sometime he toasts the bread or he just has it with jam. On some days, he just skips breakfast. For **lunch** he tries to have non-Indian food. He is not very strict in eating Indian food and explained that food is for him **"just to sustain my life for."** His parents had a big influence to his eating habits. Everything he likes to eat he learnt from them and he still prefers to have this food. They encouraged him to eat any kind of food.

In Singapore, he has **more non-Indian food** and he explained: *"I think I, I always try Malay or Chinese. I'm less strict to Indian food. Because I don't get the authentic Indian food ..."* The smell of Singapore food is quite different from the smell of Indian food, his parents had problems with that smell when they were in Singapore. According to him, people from Tamil Nadu stick much more to their diet so they might have bigger problems with food in Singapore, while people from his state Kerala are more flexible. But he admitted that his favourite cuisine is Kerala food.

Nowadays **he mostly cooks dinner** with his roommates late at around 10 pm. His roommates are Hindus and they have two to three vegetarian days per week. He is ok with that and respects the cooking habits of other religions. Before he got married he stayed with a Muslim roommate who did not eat pork, hence IP p did not cook pork. He hates cooking shows, while his wife sometimes assumes recipes from Indian cooking shows and from food blogs. When he wants to cook something new, he asks his wife or his mother for recipes. The most important thing in cooking for him is to use many spices as he is used to it. When his wife is in Singapore, they have more often fish than meat; she buys fresh fish from the market. He prepares fish only on weekends, as it is not that easy for him. IP p cooks fish, chicken, very rarely beef or pork. Sometimes they heat up the frozen paratha or chapati and have it with egg-, vegetarian-, fish- or chicken curry.

Two to three times per week, he eats fast food if he stays until late in the office and they order fast food there for everybody. They tried to end this habit and to find some Malay or Chinese food, but they still take a lot of fast food: *"But I, I wish I can avoid this. I don't want to take it."* He admits: *"(...) it's just for easiness, just to make my life easy, that's all ... It's not like I want. But ... as a variety, as a change, okay."* When his wife was in Singapore he ate less fast

food. He highlights that he is strongly against drinking Cola. For drinks, he has a lot of lime juice and tea, milk, iced lemon tea or coffee. He prefers his tea Indian style with milk. Preparing tea is the first thing in the morning and the last thing after having dinner. He **changed to prepare his tea and coffee with sachets** in the office what he never did at home.

IP p feels he does not need so much food anymore compared to the time he was younger, because in office he sits most of the day, however he admitted: *"But if you look at the Indian style, ah the food stomach is your satisfaction. So you eat your food."* He feels like in a "rat race" now, as he becomes fatter due to too much food and less activity. Since he started working, he gained weight from 65 to 80/85 kg. In Singapore, it was a bit better as he has more options to do sports, which he stopped after getting married. Hence, he gained some weight again. His parents and wife complained about this and his wife started to monitor his weight closely. However, since his wife is in India he gained weight again. He always had high blood cholesterol even when he did sport and he explained this might be due to his high ghee consume during childhood.

IP p keeps the fasting time before Easter and Christmas in Singapore, but he kept it a bit shorter, because there are fewer options for vegetarian food in Singapore: *"(...) if you practice vegetarian, I think that the problem is the same. It's the same food you are ah ... eating day by day."* That is one reason why they cook dinner at home. Sometimes he fasts also on Fridays, which means that he tries to avoid the midday meals and eats just breakfast and dinner. From his visits in India, he takes along spices, non-vegetarian and some kilogram of dried banana or dried jackfruit back to Singapore. While he explained, he can get all ingredients in Singapore and does not miss anything. During grocery shopping he always looks for value for money. He buys his food from NTUC or Sheng Siong, sometimes on the Friday market.

In general he thinks there is too much starch in the Indian diet due to the high consumption of rice, but beside this the Indian diet is very healthy due to the higher amount of vegetables. However, the Indian diet needs a little more fruits, like in Singapore: *"I think a mixed food, that's what I prefer."* He feels that vegetarian food is easier to digest and he observed that vegetarian people are less vulnerable to diseases. Staying in a country where no Indian food is available is manageable for him as long as he can cook and bring his own spices.

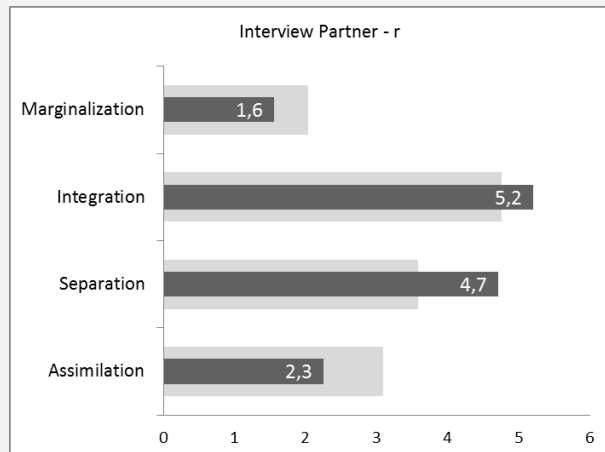
Life situation September 2013: His wife gave birth to their daughter in 2010 and she moved back to Singapore with the baby. So they all live together as a family.

A26. Interview r

"So a little bit conscious, I would say about eating habits that has developed after coming here." (IP r, line 191)

Table A26: Characteristics of IP r (source: author's own)

Socio-demographic data						
State of origin	Tamil Nadu					
Gender	female					
Age	43					
Marital status	married					
Housing situation	living together with husband and children					
Years living in Singapore	15					
Employment	own business with dietary supplements					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">reduced sugar and cooks less sweetscuts down her amount of ghee, coconut and "all these cholesterol things"includes meal replacement packages in their nutritionhealthy modificationssometimes NIF for breakfast					
Affecting Factors	<ul style="list-style-type: none">motherenvironment/company: include supplements in daily diethealthavailability of vegetarian outside food: less NIF outsidecaste/religion: vegetariantime: eating out increased					
Acculturation Indicators	<ul style="list-style-type: none">like SGPcan imagine to stay forever, but not decided yetmaintain traditions but to lower extent due to time reasons					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	white bread plain protein (soy) drink grapes water	9.00 am 9.45 am	homemade		x	x
Lunch	rice, vegetables, curry (sambar, rasam), curd, papad, mango, water	1.30 pm	home cooked	x		
Dinner	idli, sambar grapes, water	9.30 pm	home cooked	x		
Snacks	tea biscuits water	5.00 pm	outside	x		

East Asian Acculturation Measure (EAAM)**General information about his life in India**

Chennai is her home city. Her parents and in-laws were quite conservative and felt that married woman should wear saris when they go out. Before they moved to Singapore, she stayed with her husband and in-laws for three years.

Eating habits in India

In India, she did not know much about the nutritional value of food, except some basics, so they just cooked the normal things she learnt from her ancestors. They had a typical rice based South Indian **breakfast** with idli and dosa. She mostly packed **lunch** for herself like rice and vegetables. Very rarely, she ate lunch outside due to the lack of time. For **dinner** she had again dosa, idli, rice or chapati. All meals included many carbohydrates, but they were not aware about that. While she lived in India 15 years ago, there were no Western fast food restaurants. They had Indian fast food like vada, samosas and fries. The family always had fruits at home for the offerings, but they did not eat them on daily base. She talked about her eating habits in India, as she would feel ashamed: *"We will not even bother to eat fruits."* For sweetening their beverages, they used three to four teaspoons of sugar and included a lot of ghee in their cooking. The family ate out around once per month mostly South and North Indian food: *"(...) our encounters with other foods was limited to that only."* However, she tried Indian-Chinese food in India.

She had an arranged marriage and her parents looked for a vegetarian groom. From her opinion, arranged marriages are helpful when vegetarians marry vegetarians. It avoids conflicts concerning cooking non-vegetarian food. Her parents allowed her to bring home friends from other castes and they all ate together.

The relocation

They moved to Singapore because her husband got a job offer. It was the first time she left India, but she did not feel anything because Chennai is just a four-hour-flight away. Hence, she stated: *"Singapore is just like another city in India"*. They miss their families sometimes, especially on festival days or birthdays.

General information about her life in Singapore

Once or twice per year, they travel to India to make sure their children can see and learn about the traditions there. Singapore is like a second home for her. She found many Indian friends and she stated that even if they would move back to India, Singapore will always be their second home and she feels *"more free"* here. Relocating back to India would be a big challenge especially for her children. The children are not very keen to travel to India for holidays. She speaks to her daughter in Tamil, but the girl prefers to interact in English. Also her husband speaks English at home. In Singapore, they pray every morning and evening, light the lamp and offer food. Their children get involved in these family traditions. They visit the temple on selected days like Deepavali or New Year but not on a regular base and celebrate Deepavali, Pongal and Tamil New Year in Singapore. The celebrations are preceded in *"a very subtle manner at home"* and it is not possible to celebrate every festival, because there is not always a public holiday. IP r narrated to miss the festival celebrations in India with the friends and family because it was one of the few occasions where everybody came together. Contrariwise, it was quite stressful to organize the celebrations in India when they were working.

Eating habits in Singapore

When they came to Singapore the doctors found out that her nutrition level was not good and that she was close to become Type 2 Diabetes. Her mother and grandmother have Type 2 Diabetes. IP r met a nutritionist and learnt to **reduce sugar and cook fewer sweets. She cut down her amount of ghee, coconut and "all these cholesterol things"**. Hence she explained: *"So a little bit conscious, I would say about eating habits that has developed after coming here."* She started to work in a new business in Singapore where she sells food supplements. There she learnt a lot about nutrition and now knows what to eat for which reason and which supplements she needs *"to fill the gaps."* She defined a healthy diet as a balance of carbohydrates, protein, oil and some fruits and salads. IP r gained weight since living in Singapore and thinks this might be due to her deliveries. In addition, they were more physically active in India due to longer walking distances, while in Singapore everything is very

comfortable to reach. She does go to the gym but not on regular base. She learnt cooking from her mother: *"She was the one who cooked and fed us."* Her mother had the biggest influence to her nutrition so far: *"She was the major player."* Meanwhile IP r stated about cooking: *"I've lost touch in cooking. My maid only does."* IP r taught her in cooking. Her helper cooks every morning fresh while IP r just contacts her mother to ask which traditional items she needs to cook for festivals. However, she still prepares handmade spice mixes.

After coming to Singapore, they corrected their **breakfast** a little bit. They still eat Indian breakfast about three times per week, but cut down the amount of Idlis from five to three small ones. On the other days, they eat nut-based cereals for breakfast. Instead of tea or coffee, she and her husband take a soya protein drink in the morning. They drink some water after every meal. Her daughter likes more pizza, pastries and baked items. The girl does not eat the Indian breakfast and as she has to leave by 6.30 am in the morning in a rush, she just takes a piece of white bread with Manuka honey and drinks a protein shake. The maid prepares mostly rice-based **lunch** in the morning. Her daughter packs lunch for school and IP r mostly eats alone. Her husband stopped taking lunch from home because he feels it is too heavy, instead he takes his meal replacement packages and mix it with water or milk: *"So that is a balanced diet actually. Each packet contains all the vitamins and minerals needed for a meal."* For **dinner** she and her husband eat chapati or dosa. They also **include meal replacement packages in their nutrition**, which she gets from her business.

They do not restrict their children from any foods. As they were brought up in Singapore they are more used to a mix of Western and traditional Indian food. Her husband sometimes comes home late and the children eat according to their hunger, hence they have dinner together only on two to three days per week. On weekends, they try to eat all together. They cook only South Indian food at home, which is her favourite cuisine. IP r is fine to stay one week without Indian food, but after that time she would like to have a meal with rice and she might pack some pickles. They were in US for a business trip of her husband and the organizers told them as an Indian they should bring their own rice and spices, as there is no Indian food available. She was thankful to the organizers that he *"warned"* them. The kids eat pizza once or twice per week, which they buy frozen or order from outside. On the other days, they eat the Maggie noodles or rice with curd and pickles for dinner. Her children do not like fruits and vegetables too much: *"So they are then a little bit more Singaporean I should say in eating habits."* They do eat dairy products but they are still vegetarians in Singapore. Due to their caste, they never ate or cooked non-

vegetarian food at home. Her husband and IP r eat eggs just indirectly in cakes and pastries, but she cooks omelettes for her daughter at home. Earlier the smell of meat used to offend her, meanwhile she got used to it. They encourage both their children to try other foods. Her son eats chicken at the school canteen. They allowed this, but she underlined: *"Except beef and pork also. We don't ... maybe fish, chicken will be good enough to survive."* **IP r never used the word MEAT during the whole interview; instead, she said "non-veg"**.

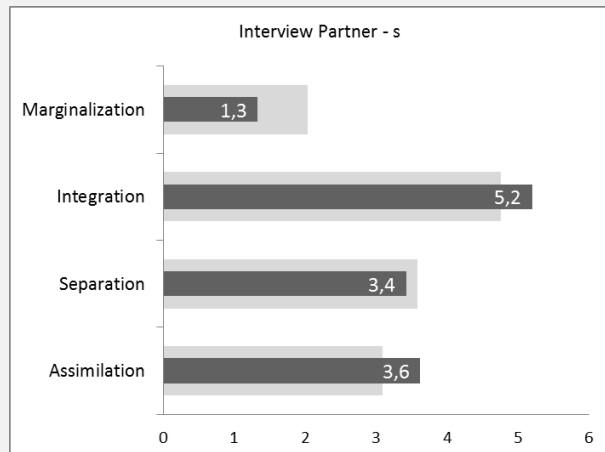
Around once per month they visit Western fast food restaurants for the kids' sake and eat French fries, apple pie or vegetables. There are not many choices for them as vegetarians and she is afraid that they use lard for cooking in fast food restaurants, hence she does not eat there. Since she has started her business, **she eats outside more often, around three to four times per week**, mostly for dinner. They eat out South Indian vegetarian food or noodles. She has not tried many foods from other cuisines, just a little bit of Mexican food like tortillas and some Thai and Japanese food. She lost interest in trying NIF because: *"(...) I have to go and fight for vegetarian food ..."* About festival food she explained: *"(...) we have adapted here so [laughing embarrassed] we just do one or two, that to the instant powders we buy for the murukku and all that. But India, we used to grind that also at home. Meaning, we will prepare everything and take it to the mill and get it ground."* In addition, sweets for festivals they had to make handmade in India in huge amounts, while in Singapore they just buy some festival sweets and keep them for guests. She is happy about these changes. To avoid sweets became a *"second nature"* for her. Only once per month she becomes cravings to eat it. She thinks she would not have made the changes in her diet in India: *"I don't think so because of the environment I was in mh it's all a high sugar kind of environment so everywhere it's all sugar and ... they think it is a way of entertaining, or what to say, it's the [short thinking] hospitality or whatever. I don't know."* IP r taught her parents to eat healthy food, so they also changed. IP's mother has a block in her heart and IP r warns her not to eat fried items. Earlier taste was the dominating factor in her diet. Meanwhile she just wants to eat for energy and is fine as long as she gets vegetarian food. She misses some vegetables from India and one spice, which is banned in Singapore: *"Other than that I think Mustafa, thanks to him, everything is available."* From her visits in India, she brings back sambar powder, homemade by her mother-in-law. To Mustafa she goes only once in a few months to buy some Indian vegetables. Since two years, she orders her general groceries like milk and rice online and buys the vegetables fresh at the wet market. Freshness is most important for her when grocery shopping.

A27. Interview s

"Indian food I don't mind at all because when I travel on work sometimes I am away for one week or ten days and I don't find Indian food its ok, I just need vegetarian food." (IP s, line 230)

Table A27: Characteristics of IP s (source: author's own)

Socio-demographic data						
State of origin	Tamil Nadu					
Gender	female					
Age	45					
Marital status	married					
Housing situation	living together with husband					
Years living in Singapore	7					
Employment	working for UN					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• uses olive oil for cooking• more cheese• flex seeds and more nuts• more NIF					
Affecting Factors	<ul style="list-style-type: none">• mother: learnt her to cook, prepare handmade spices• husband: very health conscious• availability: cheese, less fast food• taste: NIF like Thai and Italian salads• media: flex seeds and nuts are healthy• health: flex seeds and nuts					
Acculturation Indicators	<ul style="list-style-type: none">• like SGP, but plans to move back one day• does not visit temples on regular base• celebrates festivals to lower extent					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	chai tea brown rice flakes, upma	7.30 am 8.30 am	homemade	x		
Lunch	salad pasta	1.00 pm	restaurant		x	
Dinner	roti, dhal, vegetable (egg plant), salad (cucumber), yoghurt	7.30 pm	homemade	x		
Snacks						

East Asian Acculturation Measure (EAAM)**General information about her life in India**

She was born in Tamil Nadu, where her parents come from. IP s lived long time with her family in Delhi. They are Brahmins and speak Tamil as mother tongue.

Eating habits in India

She ate cereals and bread for **breakfast** since her college time. Only when they are on a holiday or on weekends they had some Indian food for breakfast in the roadside shops. Even her parents eat Indian breakfast very rarely. She never packed **lunch** in India when she was working and ate whatever she could get close to her work place, e.g. a sandwich. Her dinner included typical South Indian food like sambar, rasam, a curry, a vegetable, yoghurt and white rice. Beside vegetarianism, they do not follow much about their caste and never lived the tradition in their home that Brahmins are not allowed to eat with people from lower castes on one table. In India, the fast food restaurants have vegetarian options. When she travels to India she makes it a point to go to McDonald's and eat a vegetarian burger which she does not get in Singapore.

Eating habits in Bangkok

IP s lived in Bangkok in-between for some years. There she ate more fast food compared to Singapore as the Bangkok Burger King made "*an amazing Burger - vegetarian Burger - it is really good*". They ate out often for dinner because the restaurants there were very good and cheap. In Bangkok, it was a bit harder for her to find Indian food as there was no Mustafa equivalent. As she used to travel quite often to Singapore for work, she brought the food from Mustafa or if they had visitors from India they brought food from there for IP s. Sometimes they just substituted with some equivalent ingredients from Thailand e.g. used the Japanese Yam, which is available in Bangkok instead of the Indian Yam.

The relocation

Her husband was transferred to Singapore as a managing director of adidas. She worked in India as a management consultant for Pepsi and travelled a lot for work and for holidays. It was a bit difficult for her to move from India to Singapore as she is very close to her family. However, when she got married she moved already from Delhi to Chennai, which is the same distance like Delhi to Singapore. Hence, she explained that Singapore is just another city for her.

General information about her life in Singapore

"Singapore is I guess a really good mix of the West and India to an extend its very easy." IP s finds life in Singapore is quite comfortable as it is safe and not too much polluted and Mustafa has nice fresh vegetables from India every day - so she does not miss anything. However, Singapore is a bit boring that is why they have to travel somewhere every second month. Her parents and parents-in-law come to visit them every second year. According to her Hinduism is more a lifestyle than fixed to special rules. Her parents are a lot more religious and traditional than she is. Her husband is not very religious and he would never go to the temple by his own. She lights a lamp sometimes and tries to go to the temple on her birthday and sometimes when her parents are in the city they bring them to a temple. They follow as much traditions as they did in India, but they do not do a lot. They celebrate Pungol, Tamil New Year, Deposal, Deepavali, Holi and Rakhi.

Eating habits in Singapore

IP s and her husband are very health conscious, while she also gives importance to the taste of food. She started to use **olive oil for cooking** and learnt about it in the Singapore media. IP s uses the olive oil for regular cooking except for deep fried food. When she is in Italy for holidays she makes it a point to buy some nice extra virgin olive oil for her salads. They use very less oil and a non-stick cookware for cooking and like to prepare the food more crunchy. She also does not like to overcook their vegetables. She **eats more cheese since living in Singapore as there is a higher variety of cheese and she likes the taste**. IP s has not changed weight since the last 20 years and she is doing Yoga on most mornings.

IP s changed her breakfast habits from Indian breakfast to cereals or bread already 20 years ago during high school time. For **breakfast** three days per week, she has porridge, mostly with flax seeds, nuts and raisins or fruits. On the other days, it is a cereal or any kind of bread with cheese or butter. She gathers her information about healthy food mostly from mouth to mouth, e.g. somebody

told her that flex seeds are very nutritious so she tried to have them regularly. Her husband read that nuts are healthy and are supposed to be very good for the brain. So she uses a **lot more cashews or almonds now** especially for her breakfast porridge. Her helper, a Singapore Tamil woman, brings fresh idli dough for her once or twice per month on weekends and they will have idli for breakfast then. Mostly on weekdays, they cook North Indian food like vegetables and a dhal for dinner as it is easy to prepare. Especially her husband feels it is healthier to eat wholemeal roti than polished rice. Therefore, they eat consciously North Indian dhal as a protein source with whole-wheat roti, vegetables, a salad and yoghurt every day and mentioned: *"that's pretty much balanced for us."* Sometimes they cook South Indian, Italian, Thai and Mexican food at home. They maintain their food traditions because they are both vegetarians. On weekends, she tries to prepare South Indian food. From various media they got the information that they need a lot of carbohydrates and protein and she feels that South Indian food does not have enough protein e.g. in the sambar and rasam and also the polished rice and the overcooked vegetables she feels are not very healthy. The North Indian cuisine includes more protein sources, like kidney beans or chickpeas. They also prefer roti before the fried puri. Their helper comes every day to clean and cook.

They eat out once or twice per week in Singapore and then they try all kind of cuisines they love, like Italian, Lebanese, Greek, Mediterranean and Thai food. There are many vegetarian options in Singapore when they eat out. She likes Thai food a lot and says there are some similar dishes in Thai and Indian cuisine like the green curry with green chillies and coconut. IP s likes to eat the Thai salads including green salad, raw papaya, pomelo or raw mango and she explained about Thai salad: *"(...) the salad which is the tastiest in the world ... you don't have to feel it's healthy at all ... it's just so nice to have."* They also like the Italian salads and all the green salads with cherry tomatoes, mozzarella and olives. They **both love German bread with the hard crust** and the "Nuernberger Lebkuchen" which they know from business trips of her husband to Germany. In addition, **"Apfelstrudel" is one of her favourite foods**, which an Austrian friend brings for her when she comes to visit her. About Mexican food she explained, that it has quite a few things in common with the Indian cuisine, like the kidney beans, the rotis are like tortillas, the spices are similar and yoghurt is like sour cream.

IP s explained, that a balanced diet needs to have carbohydrates and protein. She also knows about the food pyramid. From her mother she learnt how to cook South Indian food and partly North Indian and sometimes she calls her mother to ask her especially how to cook traditional things. Many Indian

festivals are associated mainly with the different kinds of food that are prepared that day. Her mother will call to tell her what she has to prepare for the next festival and says which festivals are on which date, as they do not have the Tamil Calendar. She narrated that Indian mums are very happy to make their own special blend of spices and give it to their kids who live overseas. She guesses the person with the biggest influence to her nutrition is her mum.

She and her husband were brought up in vegetarian and Brahmin homes. Therefore, they have similar food habits. For her parents it was important to bring their children up as vegetarians and she explained: *"(...) its not religious whereas its just that we grew up that way and we have no inclination to try anything else, so **that kind of limits are habits** so..."* But for her parents to be vegetarians was probably due to religion. There is so much variety in vegetarian food that she never feels like tasting non-vegetarian food. The main reason for her in the last ten to fifteen years to be a vegetarian is more: *"Ok, I don't want to kill animals".*

She does not like the smell of eggs and eats them only processed, like in cakes. They do not particular look out for vegetarian cheese even if they know, that cheese might be made with cow rennet. **She uses the word "meat" only one time during the whole interview even if we talked a lot about it. Instead of she used the term "it".** IP s has a lot of non-Indian friends and non-veg friends and eats with them in the food stalls, that is *"absolutely no problem"* for her. Food is quite important for her. She would definitely survive without Indian food for one month but about being without Indian food for a year, she stated: *"I would probably try to do ache something to it."* She is fine if she can eat bread and salads or soups, but after ten days without Indian food, she would be happy to have at least rice, yoghurt and pickles. IP s narrated that Indians, including herself love to talk about food. Her non-Indian friends wonder already why she talks about food all the time.

In Singapore, there are not many vegetarian fast food options so she does not eat fast food very often. Only around once per month she eats fried food, like French fries and said she does not crave for fast food, but also does not *"count my calories."* She likes to buy her groceries in one place. Price is not the most important factor when buying her groceries, quality is more important. About once per month she buys food in a small shop in Little India, while Mustafa is too crowded for her. Her mother gives her spices or special dishes to take to Singapore when IP s visits India.

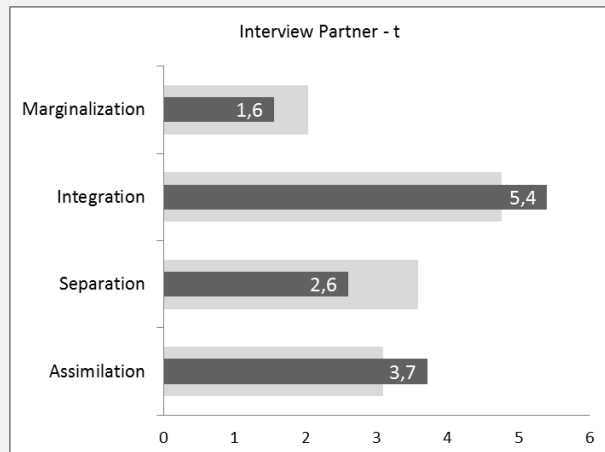
Life situation September 2013: Two years after the interview IP s moved back to India with her husband.

A28. Interview t

"I think now the only way it's changed is that we've included a lot of other things from other cuisines, you know." (IP t, line 161)

Table A28: Characteristics of IP t (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		female				
Age		36				
Marital status		married				
Housing situation		living together with husband and children				
Years living in Singapore		14				
Employment		teacher, currently painter				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">cooks more NIFNIF for breakfastolive oil when she cooks Italian foodeat more salads, every meal raw vegetables				
Affecting Factors		<ul style="list-style-type: none">healthmother: recipes, festival food, healthy dietchildren: Italian foodcaste/religion: vegetarian				
Acculturation Indicators		<ul style="list-style-type: none">likes SGPplans to move back for retirementvery religious, visiting temples regularly and celebrating festivals				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	toast with butter Indian tea with sugar	9.00 am	homemade		x	
Lunch	paratha with vegetable and yoghurt	1.00 pm	homemade	x		
Dinner	chickpeas, potatoes, chapati, yoghurt	8.00 pm	homemade	x		
Snacks	tea water	4.30 pm whole day	homemade			

East Asian Acculturation Measure (EAAM)**General information about her life in India**

Before moving to Singapore, she lived with her family in Delhi where she worked as a teacher. She said about her family and herself they are very much *"city dwellers"* and she went only once to a village in Tamil Nadu with her parents. Her husband is also Tamilian. Caste never had an influence to her daily life as she grew up in a very cosmopolitan city.

Eating habits in India

At home, they ate a balance of both North and South Indian food. Her mother cooked for them *"hardcore Indian food"* as well as other things, hence she grew up with eating a lot of different food at home as well as in outside restaurants. She thinks that might be the reason why she does the same thing with her children. Overall, they had mostly Indian food. They ate Indian **breakfast**. For **lunch** she packed food half of the week and on the other days she had lunch at the cafeteria. **Dinner** in India was always with the family. Everybody was welcome at her parents' home to eat with them together. They did not even think about caste and never made friends based on that. Ayurveda plays an important role in their cooking. Her mother learnt it from her family and taught IP t about it. The mother was *"always very conscious about what ... what each ingredient means and in that, in that dish and what it brings to it."*

India has a lot of different fast food and chaats and they ate many of this.

The relocation

She followed her husband to Singapore after they got married. It was the first time she left India and she missed her family a lot and felt a bit homesick in the beginning. Nevertheless, it was also a very exciting time.

General information about her life in Singapore

Meanwhile she got used to Singapore and mentioned it is *"pretty much home now for us"*. They set up their life there, have their friends and both of their children were born there. Singapore is very comfortable and she could imagine to stay there for long term, but not to retire. They speak a *"hodge podge"* of every language at home in Singapore including Tamil, Hindi and English. Their children understand everything but speak only in English and she comments: *"this is a common problem with us."* Her parents visit them in Singapore for three to four weeks per year. They travel to India once per year.

She explained to be a devotee of Lord Ganesha and she painted already a lot of pictures of him which decorate her walls. *"I'm obsessed with him so yeah."* She goes to the Ganesha temple in Chinatown every Tuesday. They explain the Indian traditions to their children and they all go together to the temple in traditional Indian clothes. Although they are *"technically Hindu"*, they celebrate all public holidays including Christmas and New Year's Eve and she admitted: *"It's just an excuse to feast, I think."*

Eating habits in Singapore

In Singapore, they include a lot of NIF in their meals. Her kids like Italian food and they *"Indianized"* Chinese food, as the kids do not like the authentic Chinese food from the food courts, so they do a *"mish mash"* at home. She **learnt to cook one or two dishes of every cuisine**, also Mediterranean and Mexican food, which her son likes. IP t uses **olive oil when she cooks Italian food** and sunflower oil for Indian food. According to her sunflower oil is *"quite a light and heart healthy oil"*. They also **eat more salads and at her home for every meal, raw vegetables** are consumed. She has a helper. When she talks about cooking she always uses *"we"* but never makes sure, who is doing the cooking. After the interview, she prepared some Indian food; it mostly was Indian convenience food.

She has toast for **breakfast**. For her children's breakfast, she tries to make a cooked breakfast e.g. eggs, grilled cheese sandwich or sometimes she makes Indian breakfast like idli or dosa. It can be also a cereal or bread with jam, but she prefers to make a cooked breakfast at least on school days. For **lunch**, she had one paratha with carrots and peas and chapati and yoghurt. Her children pack lunch from home and her husband eats out for lunch every day. At 7.30 pm they have **dinner** all together, except her husband might be late, but the children always have dinner by 7.30 pm fixed. They prepare Indian food on five days per week, mostly on weekdays. While on weekends, she sometimes

makes a burger dinner or noodles. The recipes for non-Indian food she gets from a book or from friends or she tries to identify the ingredients when she has a meal at a restaurant and then duplicates it at home. For drinking, she takes tea and about two to three litres water per day.

Food for her *"It's not just an eat to survive' thing."* Nutrition is a huge part of it, she mentioned food has to have nutritional value; it has to be balanced and should have a good quality and flavour. Mealtimes are an important family time for them. She would not have a problem to stay without Indian food for a week, as they did it many times during their holidays and for travelling. Nevertheless, she cannot imagine living in a country where she cannot get Indian food at all. She said she would get sick. IP t feels that Indian vegetarian food is very well balanced and healthy as the fats are all optional and the vegetables do not contain much oil. They maximum use one teaspoon of oil for the seasoning and other than that all the foods are steamed. To the fried food like papadums and parathas one can always say *"No"*, so it is all optional and *"fairly balanced."* Hence, an Indian vegetarian meal can be healthy or non-healthy. She finds deep fried greasy food is unhealthy and she tries to eat it rarely. South Indian food might be slightly lighter as they do not use cream for anything and do not use as much ghee as North Indians do. She feels, as they are vegetarians they have a healthy diet anyway, because they eat a lot of vegetables and fruits.

When she cooks South Indian food, she makes rice and explained that the South Indian food lends better to rice. As staple for North Indian dishes, she prepares Indian breads. When she cooks Indian food, she continues to steam the vegetables. Her children are used to mild spiced food so she does not cook very spicy. They give at least one spoon of ghee to the children's rice for every meal. They will do this until they are teenagers and do not like ghee anymore. Ghee is good for the immune system and it *"(...) contains the basic chemical of cholesterol of ah ... all the, all the hormones"*. So it is good for children while they are growing to *"(...) ensure that everything, ahm all the hormones, they're formed properly and things like that."* Since she has children, she thinks more about the nutritional components of food and about a balanced diet. She reads a lot about recipes in books, which she borrows from the library. When her children were smaller she gave them many choices concerning eating, but then they got very *"fussy"*, so now she says, *"what's put on the table has to be eaten"*. She lost weight after her daughter was born, but she is heavier than 14 years ago when she arrived in Singapore.

The person with the biggest influence to her nutrition is her mother. She remarks about her mother that she is an amazing cook and cooked all sorts of

different foods. When they travel to India her mum cooks food e.g. snacks for them, which they bring to Singapore. She calls her mother from time to time to ask her about help within the cooking. When her mother comes to Singapore for a visit, she cooks with her together and her kids have their own things that they want her grandmother to prepare. She said her mother is *"very happy to feed us"* when she is in Singapore. IP t follows the Ayurvedic cooking system, which she learnt from her mother. They do their grocery shopping in different places. It can be Mustafa but also Carrefour or Cold storage. For buying spices, she goes to Little India. When she does her grocery shopping price, taste, quality and the value for money are important for her. She misses the Indian fast food and chaats in Singapore, although she prepares sometimes chaats but says that is *"only a very pale substitute."*

She and her family are vegetarians *"by choice"*. Being a vegetarian due to caste or religious reasons is from her opinion a *"dying thing because in today's world, everybody is so cosmopolitan that everybody eats and drinks everything. It's a matter of personal choice more than any restriction from your religion or something like that."* She does not have any food restrictions from her religion. Her husband and her children eat eggs; she eats only eggs in cakes, but not in pure form. It is not a problem for her if somebody eats meat beside her on the same table.

They prefer to go to the temples in the morning as it is advised to go there with an empty stomach. Therefore, they go, pray, and then break their fast with eating the offerings they get from the priest. They celebrate all Indian festivals in Singapore like Deepavali, Navratri, harvest festival and Tamil New Year. On festival days, they get together with friends, cook festival food and go to the temple in the morning. She learnt about festival food from her mother and her mother-in-law. Each festival has its own special food offerings. In general, the offerings are generic but there are small differences from family to family. Since she is married, she follows the traditions of her husband's family.

They eat out once in a couple of weeks at different restaurants *"(...) whatever takes our fancy."* Some days her children are allowed to choose where they want to eat out. Than they have pasta or Indian food or whatever they decided. The family eats fast food around once in two to three month in Singapore, as there are not many vegetarian options in Singapore fast food restaurants except French fries and apple pie.

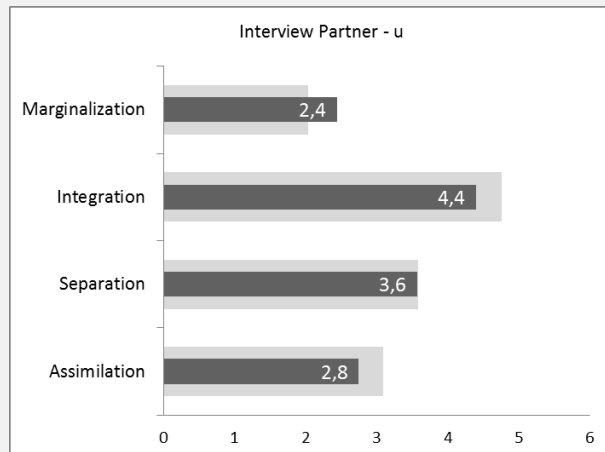
Life situation September 2013: One year after the interview took place IP t moved with her family to Bangkok.

A29. Interview u

"Usually, I'm so used to like my, my mum used to be at home, she used to prepare something. Here, it's like one additional responsibility. It's not only I have to study, it's still like, I have to eat to study, I have to live to study, like that." (IP u, line 749)

Table A29: Characteristics of IP u (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		female				
Age		26				
Marital status		single				
Housing situation		living together with another Indian family				
Years living in Singapore		6				
Employment		Software -Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• mostly skipped breakfast and dinner in the beginning• less oil• more eggs• partly substitute rice with wheat• more NIF• more outside food• ate more fast food in the beginning				
Affecting Factors		<ul style="list-style-type: none">• father: taught her about healthy diet• caste: vegetarian• health: less oil, tea, coffee and rice• taste: less Chinese food• trust: less Chinese food• availability of vegetarian food is less				
Acculturation Indicators		<ul style="list-style-type: none">• does not like SGP• plans to move home or to another country soon• maintaining traditions to lower extent due to time limits				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	pongal, tomato onion curry	9.45 am	homemade	x		
Lunch	rice, dhal, curry, potato fry, curd, papad	1.00 pm	homemade	x		
Dinner	dosa, coconut chutney	8.45 pm	homemade	x		
Snacks	pumpkin pancake orange juice	6.00 pm	homemade	x		

East Asian Acculturation Measure (EAAM)**General information about his life in India**

She was born and brought up in Chennai. Her mother worked as a librarian since IP u was a baby, so she went to kindergarten since her early childhood. She has one sister. Her family belongs to the cast Kshatriya, which means “warrior” and is the second of the four basic divisions in the caste system. Her caste was important when her parents had chosen a husband for her, as they wanted a man from the same caste. Her wedding was already planned by the time of the interview.

She visited the temple with her family on festivals days and enjoyed the festivals, as it was always a funny time and a good opportunity to mingle around with relatives. However, she was never too much related into religion. IP u prays and believes in god and undergoes whatever her parents asked her to do. She stayed with her parents until she moved to Singapore.

Eating habits in India

In India, she had for **breakfast** dosa, idli, pongal, a variety of chutneys, sambar, puri and sometimes chapati. During her college time she usually packed **lunch** which included some kind of rice e.g. curd rice, or papad, some side dishes of vegetables, puri, curries e.g. ladyfingers curry. For **dinner** they had the same food as they had for breakfast except in her home they did not eat rice for dinner.

Her parents are both from the same caste, but from different divisions, so her mother eats meat while her father is a vegetarian. After getting married, her mother stopped eating meat at home. They eat onions and garlic in her caste. IP u is a vegetarian due to her caste. She eats eggs, cheese and drinks milk. Beside this, caste never had an influence in her daily life. *"If my friends are*

coming over, be it from any religion or any caste or anything like that, they are free to come to my house."

Her mum was mainly cooking; IP u used to cut the vegetables and her father steamed the rice. The mother got up every morning at around 5.30 to 6 am and started cooking for the day. After that, she went to work. IP's father had a bigger influence to her nutrition because he was more conscious about healthy food than the mother was. He forced her to eat her vegetables and told her which food is good and which vitamins are inside. He also taught her that tea and coffee are stimulants and are not good for health. Therefore, she does not drink it very often. On weekdays, they mostly had non-Indian snacks like doughnuts and cakes, which her mother bought from the pastries on her way back from work. On weekends, her mother prepared many chaat food snacks, which the whole family loved. They ate them for snack time at around 5 pm to 6 pm. While dinner time at her home was between 8.30 pm and 9 pm. For drinks, they have some ready-made hot and nutritious drinks called *complan* in India; but her mother also used to make them by her own. She also drank *ragi* every day, which is very good for health and tastes very nice. According to her, Indians are hopeless in their nutrition as they take a lot of oil and sweets and the vegetables are too cooked. She thinks that Indians top the list of having high blood pressure and heart attacks.

The relocation

By moving to Singapore at the age of 17, she left India for the first time. She came to do her Poly diploma there. After a few months, her father came to Singapore to check how she is doing. The first year was "*horrible*" for her as she was too young and felt very homesick. It was tough to cross over especially as she was very frustrated about the food in Singapore. However, she came over it and explained: "*I cannot afford to be homesick actually.*" IP u thinks life in India "(...) *seems to be more fun and enjoyable there*" as she would know her neighbours by name and would celebrate festivals or functions with them.

General information about her life in Singapore

She is happy about the different experiences she gets in Singapore and even that the first few years were very tough for her she is proud that she made it. During her school time in Singapore, she used to work part time in McDonald's and she gave tuitions. Due to these experiences, she became very independent. However, the city is very small with no entertainment and there is not much to do, except meet friends or go to the same places repeatedly. Therefore, she plans to shift soon to a bigger place. She finds people not very

friendly in Singapore and complains that she even does not know the people next door to her and that even people of the same ethnic group do not want to mingle around. About Little India she stated that it is very congested and she does not feel comfortable to go there, because people stare at her there and she felt very unsafe when she went there as a young girl.

In the beginning, she lived together with five friends in an HDB apartment in Singapore. They were all from different states and spoke different languages. Six month ago, she moved to an Indian family, who is from a place near Chennai and speaks her language. She found them via a social network for Indians on Facebook.

Concerning religion in Singapore, nobody is there to put pressure on her, so she goes to the temples occasionally, mostly when she feels bad. She still believes in god and prays at home, but up to her own choice. On festival days, she makes it a point to meet her friends *"so that we don't miss our culture."* IP u is very happy to talk about the festival of lights, which she celebrates with her friends in a big fashion in Singapore. They also celebrate Pongal. For Thaipusam she goes to the temple to pray, but does not all the things which the Singapore Indians do, like piercing and go on fire and all those things. For almost all festivals, they tend to buy new clothes.

Eating habits in Singapore

Her food habits changed a lot after she came to Singapore. Sometimes she had cereals or a sandwich for breakfast, but mostly she skipped breakfast and also dinner completely: *"(...) my food was really hopeless and I didn't have proper food."* The Indian food in Singapore's hawker centres is completely different from the South Indian food in India and she explained the food is *"really horrible"* and she is very frustrated about this. IP u complained that even the names of Indian foods are sometimes Malay or Chinese and in general: *"The Chinese food there's like, ahh, has a lot of influence. Even Malay food still have a lot of influence in the Indian food. And exactly it's not Indian, it's a fusion food, but it's never Indian actually."* In proper Indian restaurants, it tastes also a bit different, but at least not that worse compared to the hawker centres. When asking her why she did not cook by herself she explained that she was not too lazy to cook, but she was *"bugged up"* to eat alone. In India, her mother cooked and she was used to that situation. **Now she feels she has an additional responsibility** as she has to work, study and to cook. During these first months in Singapore, her family was so sad that she did not eat properly there. Therefore, they sent her Indian sweets and snacks whenever friends or relatives travelled to Singapore. IP u explains that she *"paid"* for her worse

eating habits during that time and she lost weight. Finally, she was admitted to hospital. Due to her bad health condition, she moved back to India for studying and came back to Singapore for working after she had finished university.

Once she realized that she did not like the Indian food in Singapore, she started to explore vegetarian food from other cuisines like Chinese, Malay and Western food. She feels Chinese food is quite raw: *"If the vegetable seems to be very raw, I feel ... like I'm some cow or something like that ... It's not to tell something wrong about their food, but I'm not used to it."* She has no problems to adjust to cheese and bread but not to the very raw Chinese food. Beside the taste, she thinks Chinese food is healthy as it is quite raw and does not contain much oil compared to Indian food. Hence, she also started to use less oil in her cooking. IP u wants to try more Western food as it is also very modern now in India to eat Western food; while eating Chinese and Malay food is not very common. She also tried some Japanese food, but mentioned that there are not many vegetarian choices. Also Mexican food like burrito was tested by her and she is ok with it, but says she could not eat it continuously.

When she stays late in office and her colleagues order pizza, pasta or fast food for dinner, she cannot be out of the group, so she always eats a bit of it, although she does not like it. While IP u worked for McDonald's she had a few burgers and pineapple pie, but became bored of it after a while. Nowadays she stated about McDonald's food: *"I just hate it."* When she eats out for lunch or dinner on weekends, she mostly goes to Indian restaurants.

Overall, IP u concluded, that no other cuisine *"make me feel better, than at home."* She ate the same kind of food for 18 to 20 years in India and said: *"My changeover doesn't take place that fast."* She loves her mother's food, especially the vegetable Biryani and says she is not able to reproduce it. When her mother told her earlier that she needs to learn how to cook, she preferred to enjoy life at that age. Then, when she came to Singapore at the age of 17 she thought: *"Oh, my god. I think I should have listened to her and tried at least something."* To be one week without eating Indian food is manageable for her as she made it already a point to try that for herself and it worked. If it would be two weeks, she would become very mad. Most important for her in the Indian cuisine are the spices: *"That is the taste, taste of India."* About her home visits she narrated: *"I eat crazy, I'll go crazy. And I'll ... my whole way of eating will change. I think I'll start to eat some four times."* While in Singapore, she eats three times per day and does not eat many snacks.

Concerning her religion and food, she concluded: ***"Being a Hindu and a vegetarian, there is nothing much restricted. I'm already restricted from***

meat. [IP laughs.]" She explained that it is very hard to live as a vegetarian in Singapore. In India, the variety for vegetarian food is much higher and another point is that she does not know what is mixed into her food in Singapore: *"I might have had so many things without my knowledge also."* She never tried meat by her knowledge. However, her friends told her that some Chinese food stalls use pork oil also to prepare vegetarian food. So actually, she stopped eating Chinese food due to this. She used to fast when she was studying to get good grades. Fasting for her means that she is not supposed to eat solid food those days until 5 pm. While she is also allowed to drink water and will also drink at least a glass of milk and eat some fruits. After that, the day will be completed with dinner.

The Indian family she lives with at the moment cook for her breakfast and dinner every day, also on weekends. She pays them for this. *"So it's like I'm back in Chennai."* She is very happy about this current situation especially concerning the food it is *"like maybe honeymoon period"*. She is worried as soon she may suffer again when she shifts to another country or she will get married and then need to cook for herself and her husband. With the Indian family, she eats a rice related Indian **breakfast** with dosa. For **lunch** she is going to an Indian food stall and has roti and some side dishes. IP u makes it a point to have rice only twice per week for lunch and to eat more eggs. For **dinner** she has Indian food with the family she stays with. On festival days like Deepavali and Pongal she cooks a lot of dishes, especially sweets like Gulab Jamun and Sweet Pongal with her friends. Gulab Jamun is one of her favourite foods. She loves to eat sweets. One of her relatives got Diabetes with 32 years and he has to take medicine for this. That scared her a lot so she reduced her sweet intake. But she admitted: *"Sweets are just like ... just like next to water"*. About her eating behaviour, IP u explained: *"I try to maintain at least my weight. But other than that, all these vitamins and all those things, I don't really make it a point to know that much."* She read some books for recipes but not about nutrition. The only thing she checks nowadays is the fat level of the food she buys, to maintain her weight and she tends to eat more wheat-based food like roti and chapati and reduced her rice intake for lunch to two rice meals per week, because rice has more carbohydrates and less fibre compared to wheat. Her landlord lady buys all the groceries now. When IP u cooked by her own, quality was an important shopping factor for her. She had some small shops around her place where she bought her spices or she went to Mustafa.

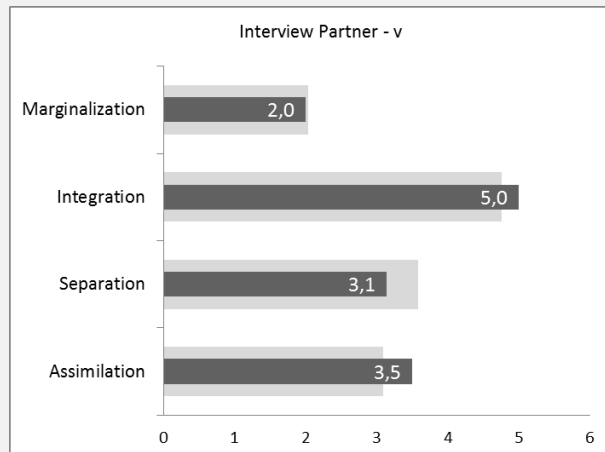
Life situation September 2013: IP u got married some weeks after the interview took place. She moved together with her husband to the US.

A30. Interview v

"Actually till then I think there was no problem with the food or anything as such because anyways, my family was there. Everything was taken care by them. I think only in Sing - when I moved to Singapore, it was - I have to take responsibility of my own, right? So, that's the thing." (IP v, line 54)

Table A30: Characteristics of IP v (source: author's own)

Socio-demographic data						
State of origin		Karnataka				
Gender		female				
Age		27				
Marital status		married				
Housing situation		living alone				
Years living in Singapore		2				
Employment		Software-Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• more NIF• skips breakfast• more fast food• eats most meals outside home				
Affecting Factors		<ul style="list-style-type: none">• availability: less vegetarian options• convenience: prefer to eat outside• household composition: not allowed to use the kitchen• religion and caste: being vegetarian gives her less option in food				
Acculturation Indicators		<ul style="list-style-type: none">• likes SGP, but plans to move back after 5 to 6 years• does not visit temple on regular base, reduced praying• celebrates festivals to lower extent				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	some cookies, biscuits, Milo	9.30 am	outside	x		
Lunch	roti, fruits	12.30 pm	outside food	x		
Dinner	some muffins and snacks	9.30 pm	bought from outside	x		
Snacks	water	4.00 pm	outside			x

East Asian Acculturation Measure (EAAM)**General information about her life in India**

IP v lived in her hometown two hours away from Bangalore until she had finished her studies. When she started to work, she moved together with her whole family to Bangalore and stayed there until her relocation to Singapore.

Concerning caste she commented: *"(...) even being Indians, we don't know the caste system in India. I mean, there are so many caste subdivisions."* She followed some caste-related traditions in India, but in personal, she does not believe in the caste system. From her generation it started that they also marry people from other castes.

Eating habits in India

Her mother took care of her nutrition and cooked for her almost every meal. She had mostly Indian **breakfast** including dosa and idli. [and she is very happy to talk about this.]. Only sometimes, they ate bread with jam and butter. The mother cooked the food for the whole day in the morning and prepared the rice fresh in the evening when she came back from office. While living at home IP v never tried to cook at all, she just sometimes helped her mother with the cutting. Usually her mother packed **lunch** for her; otherwise, she ate in nearby hotels. For lunch, she had rice and some vegetables. For **dinner** they mostly had rice, paratha or chapati. When her mother was not at home, they went to the nearby restaurant to eat. She is vegetarian, but eats onion and garlic.

In her grandfather's generation, it was not allowed to eat together with people from a lower caste on one table, *"(...) but from the day I was born, I don't have any restriction like that. Because we go to school and even we'll study together we don't know about the caste, you know what I mean, who belongs to which*

caste." As her husband is not a vegetarian, one week after their wedding they did a party with close friends and relatives where they served meat.

The relocation

After 2.5 years working in Bangalore she successfully joined an interview in Bangalore with the company manager from Singapore and got this job. It was the first time she left India and it was not a problem for her to leave.

General information about her life in Singapore

IP v misses her family and friends and the social gatherings in India. Once in six month she travels home to India for minimum one week. When she goes to India, she always gains weight. Her parents have not been in Singapore so far.

About Singapore, she mentioned: *"(...) it's a good place and good city to live in. Sophisticated"* and *"apart from the food, I think I don't have any other problem."*

A few weeks ago, she got married and now her husband tries to find a job in Singapore. He still lives in India. She stays in Singapore with another Indian family, but they do not cook for her. This family settled to Singapore 25 years ago, so their culture is already a bit different from hers. IP v keeps her traditions in Singapore. However, she narrated that her prayers got shorter and she does not go to the temple in Singapore very often, mostly on festival days. When she goes back to India, she makes it a point at least to visit the temple once.

Eating habits in Singapore

Before moving to Singapore, she did not have any problem with food at all, as she lived with her family and her mother took care of her diet. In Singapore, she **eats almost every meal of the day outside**, so her diet habits changed a lot. She **almost skipped breakfast**. As lunchtime is already at 12 pm, she goes for lunch directly. Sometimes she eats some biscuits or cookies for breakfast in the office. On weekdays, she eats **lunch in a food court** nearby the office but stated: *"And the food intake, whatever we get over here in the food courts. It's not the same as, I mean, we won't prefer that."* On weekends she also goes to a food court or Indian restaurant for lunch or dinner in Little India while on weekdays she only goes to Little India for dinner *"(...) if I feel desperate that I have to eat something nice."* Mostly she has Indian food for lunch, sometimes also Chinese, Mexican or Thai vegetarian food. But these cuisines offer limited vegetarian options. She is a vegetarian due to religious reasons and sees this as a kind of problem: *"Actually, that's the main problem. If I can eat non - veg also then I think we have a lot of options"*. She eats eggs only in cakes, not raw or boiled, but she drinks milk. During several statements within the interview,

she argues that her problems to find proper food in Singapore are mainly based in the limited vegetarian food option: *"So, again, and most of the restaurants over here, not veg, I mean, there are very few with purely vegetarian stuff. So, that's one more additional problem."* At another point, she mentioned: *"I'm basically a vegetarian, so maybe the problem comes from that also."* For **dinner she has some bread at home or takes dinner at Subway, McDonald's or a food court**: *"Evenings normally fast food and things like that."* IP v prefers to have dinner outside as she comes home late from office. In addition, she is not allowed to use the kitchen of the family she stays with to do *"full-fledged"* cooking. Only once or twice per week she is allowed to use the kitchen for bread toasting. She does enjoy a good dinner, but prefers to have it with some company like friends or family. After eating fast food e.g., pizza for more than two days she gets frustrated and then she needs rice. IP v goes to McDonald's but complains that she even cannot eat chicken there. For the chicken burger, she asks them to put the chicken out. Hence she prefers to go to Subway as they have a *"vegetarian delight"* which is much more tasteful and: *"(...) at least they put some vegetables and all that, that would be good."* She eats fast food in Singapore once to twice per week mostly for dinner. Her **fast food intake increased** immense in Singapore and she is afraid to gain weight if she continues to eat a lot of it. Her favourite food is Indian food.

After she relocated to Singapore, her mother sent her many things for cooking as she expected her to cook regularly. Meanwhile she stopped that. Her mother is still worried about her nutrition and asks her on the phone to go to Little India to eat proper food and not to have just bread before she sleeps. The person with the biggest influence to her nutrition she says is her mum.

When her husband moves to Singapore, she will need to cook for him: *"So, there is no other option, I will cook."* As she does not know much about cooking so far, she will have to explore and learn once he is there. IP v plans to call her mother every day and ask her all details about cooking and hopes her husband might help her with cooking. When he moves to Singapore, he will bring all the spices that her mother prepared already.

She and her husband belong to different castes. He is a meat eater and initially her family had a problem with this fact, but now they are consent. He agreed that he would not force her to cook meat and he will eat meat only outside home.

Travelling to a country where she cannot eat Indian food would be manageable for here, because after two years in Singapore she got used on eating bread and things like that. IP v stayed in Romania for work three weeks and just had

pizza and bread there, which was ok. However, she stated moving to a European country would be difficult, as it is hard to find Indian food there. She is too lazy to cook in Singapore as she has too many other options there. However, if she would move to Europe she would definitely start to cook.

She misses the authentic South Indian food in Singapore, because the Singapore Indian food is not spicy and salty enough. Whenever she goes to India or when a friend from there comes over to Singapore they will bring snacks, sweets and other special food items from there.

From her opinion, healthy food is what she ate daily in her "*routine life*" at home in India. She stated that home food is healthier than outside food. Only the Indian festival food it is not healthy because it includes many fried items.

Sometimes she follows things, which she reads about food in the news or in the internet, or she googles which foods are healthy for what.

One of her Indian friends in Singapore cooks all the traditional Indian festival food on the ten to twelve festivals they celebrate per year. This friend will call IP v to come over on festival days.

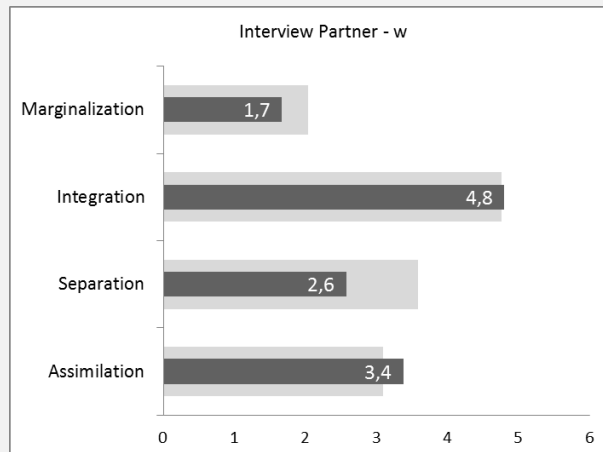
She only needs to buy a minimum of groceries, as she does not cook. In the beginning, she bought that in Little India at Mustafa but now she manages to buy everything in Chinatown. Most important for her grocery shopping is the food quality and the freshness.

A31. Interview w

"In India my mother cooks, I ... I was eating ah but here I cook and have it, so I was learning cooking here and so sometimes it wasn't that good to eat [laughing], so I was experimenting all those ah varieties with my husband." (IP w, line 225)

Table A31: Characteristics of IP w (source: author's own)

Socio-demographic data						
State of origin	Tamil Nadu					
Gender	female					
Age	31					
Marital status	married					
Housing situation	living together with husband and daughter					
Years living in Singapore	7					
Employment	Software -Engineer					
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes	<ul style="list-style-type: none">• eats less mutton• did not change their eating habits compared to India• learnt to cook• started to eat more NIF• eats out less• stopped fasting before Easter• started to eat fast food					
Affecting Factors	<ul style="list-style-type: none">• mother: learnt maid how to cook Indian food, prepared Indian recipes for IP, told her to stop fasting• taste: like to eat Indian food• daughter: eat fast food sometimes, stopped fasting traditions• trust: eating less fast food					
Acculturation Indicators	<ul style="list-style-type: none">• likes SGP, not decided yet about future plans• goes to church regularly• celebrate Christmas and Easter to lesser extent					
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	upma	8.00 am	homemade	x		
Lunch	brinjal curry, rice, omelette	12.30 pm	homemade	x		x for omelette
Dinner	chicken curry, potato fry, Rice	9.00 pm	homemade			x
Snacks	Milo	4.00 pm	outside			x

East Asian Acculturation Measure (EAAM)**General information about her life in India**

She lived together with her parents and her older brother until she finished school. Before moving, she worked in Chennai in software controlling and stayed there together with friends. IP w is Christian and she explained that castes exist also for Christians. Meanwhile she forgot about her caste, but when she got married, her father was very particular to wed her to a man from the same caste. She stated when her daughter gets married, caste will not be an issue at all. Caste is also important for the education system. Different colleges will allocate seats based on the caste. She had to show her caste certificate at the college. Her parents never checked from which caste her friends came. *"No, in our house there is no this things".*

Eating habits in India

Although her mother worked in India as a teacher, she always cooked everything fresh. She got up at 4 or 5 am in the morning to cook the food for the day. IP's husband who partly joined the interview explained that the role of housewives nowadays changed depending on the education: *"(...) the more they grade ... the more they go higher, they do other things."*

When IP w stayed with her friends in India they seldom cooked, hence she had much more outside food in India compared to Singapore.

The relocation

IP w followed her husband to Singapore. It was the first time she left India. She was very sad, but did not worry too much, because she knew that her husband is a nice person.

General information about her life in Singapore

Her brother also lives in Singapore and her parents and in-laws visit them regularly. Every year in December, they travel home to India.

During the first six month, she was alone at home in Singapore and got bored after a while, but after she found a job, she was fine. After her first holiday in India, she got again very sad. Henceforward her mother started to visit her in Singapore frequently and IP w stated: *"(...) now the frequency is getting higher, so it's nice, I like it."* She likes everything in Singapore, but she misses her family and friends and has only a few friends in Singapore.

Her daughter visits a multicultural school. They speak to her daughter in Tamil, but after she started school, she increased to speak more English. In school, she is studying Mandarin, but not Tamil.

IP w is born as Christian and following these traditions. They do celebrate Easter and Christmas in Singapore. They also have a Christmas tree, make a crib and go to the church for Christmas night and on New Year's Eve. The first three Sundays of a month, they visit a Tamil mass and she explained they live their religion the same way as they did in India.

Eating habits in Singapore

They did not change their eating habits much, except that both **do not like the taste of the mutton meat in Singapore and reduced their mutton intake**. Other than that, their food is almost the same. She started and learnt to cook in Singapore. Her mother prepared her for that: *"(...) she has written everything in a ... in a note book, in a ... then she give it to me, when I was leaving."* [IP laughing] So she cooked together with her husband. Another change in her nutrition is that she **"... learnt to eat Chinese food"** [laughing loudly]. She likes Chinese fried rice, pepper chicken and soups, but added that she does not like all Chinese dishes. She eats chicken, mutton, fish, but not beef because she has seen once how they slaughtered a cow which was very cruel.

They eat Indian **breakfast** like idli, which her helper prepares fresh in the morning. Sometimes her daughter does not like it and she eats *"all those Kellogg's things"*, bread or egg toast. IP w commented: *"she will eat ... all those ah Western food"*. IP w packs **lunch** for work; it is mainly rice with curry - always Indian food. In her daughters school it is not allowed to bring food from home, so she has to eat lunch in school, which she mostly does not like. Hence, IP w gives her some biscuits after school. For **dinner** they mostly eat Indian food at home. Sometimes they get bored of the Indian food and then they eat Chinese food in food courts or also Thai food or meet with somebody at a

restaurant, but *"Otherwise we prefer to eat at home."* She ate out more often in India. Beside Indian food, Chinese and Thai food is her favourite. When she travelled to Europe for business trips, she took her electric cooker and the Indian ingredients and then cooked there with her Indian colleagues. The company allowed them to ship the rice cooker and all the ingredients to Germany. IP w also visited an Italian and a Chinese restaurant in Germany and they were also invited to a German friend's house where they ate *"a lot of white sausage"*. She did not like the breakfast in Europe: *"(...) when I went to Romania and Germany I ate only bread, butter, than with sugar, than ..."* for breakfast. In Romania, she ate lunch in the canteen. The food there is very different and they eat huge amounts of food there, which she can only finish half. *"But friendly speaking ah ... European food ah is difficult for me"*, because she is not used to eat bread. In India, people eat bread when they get sick. When she had a fever as a child, her mother gave her bread. She likes to eat butter, but not cheese. Moreover, she does not like soft drinks. When she is exposed to NIF, she starts to count the days until she can eat Indian food again. Before IP w came back from Romania she told her mother [who was in Singapore during that time] what to cook so that this food is ready once she arrives back in Singapore. Then when she came back, she had a big feast. She explained to be one week without Indian food would be ok, but more than one week would be difficult for her: *"Yeah food is very important for me actually [smiling]. Whenever I go I miss the Indian food."*

Her mother was the person with the biggest influence to her nutrition so far. She did not have time to learn cooking from her mother because she was in university in another city and later she started to work. Therefore, she never stayed for a long time with her mother and then immediately she got married and moved to Singapore. There was no time in-between to learn cooking. She named her mother to be a great cook and she does not cook like her, even if she learnt a lot in the past years. She still calls her mother when she has a question concerning cooking. The mother collects a lot of cooking books and cook magazines and since she knows how to operate the laptop, she started googling for recipes and watching cooking videos on YouTube. IP w misses some Indian snacks, which her mother makes. They can buy them in Singapore, but prefer the taste of her mother's version. Beside this, she can find all the Indian ingredients for cooking in Singapore. After the birth of her daughter, she gained some weight. Beside this, she did not change weight in Singapore.

Usually her helper cooks breakfast, lunch and dinner as IP w comes home from work late. When her parents or in-laws are in Singapore, the mothers will cook.

Her maid worked in a Malay house before and she never tasted and never cooked Indian food before. Hence, IP's mother taught their maid how to cook Indian food and *"now she is cooking very nicely"* [laughing]. She stated now her maid cooks almost as good as her mother, at least 90%. Sometimes their maid also cooks Indonesian food for them. Her husband knows how to cook basic Indian food, especially with mutton, so he also cooks sometimes.

IP w and her husband are doing the grocery shopping. Most important for them is freshness especially for fish and vegetables. The *"general things"* they buy in NTUC. Once per month they travel to Little India to buy specific Indian ingredients in the Indian shop. When their parents are in Singapore, they buy fresh food every day at the wet market. She prefers the *"healthier choice"* for her daughter and for herself. They both do not like to eat fatty foods. Her husband explained that his family, especially his mother is *"very fat"*.

They explained: *"actually our family is in-between"* when it comes to healthy food. From their opinion, some people are too conscious about eating. While IP w and her husband agree with each other, that they are not too strict in always looking for fresh and healthy food.

When her mother comes to Singapore, she will bring her own spices like chilli powder, which taste much better than the ones from the Singapore shops.

Before her daughter was born, she did a 40 days fasting before Easter. After she gave birth, her mother told her to stop, as she should take care of her health. They also stopped practicing the tradition to eat only vegetarian food during Lenten season, because their daughter likes to eat non-vegetarian food very much. Sometimes IP w fasts on Fridays. She is missing festivals like Christmas, because in Singapore it is not the same without the relatives around. In India *"(...) my mother is the main person. She will cook lot of sweets, ahm cakes and ... and many eatables [laughing] and distribute to all the ... relatives and friends houses."* They do not celebrate the Hindu festivals, except sometimes for Tamil New Year her mother will cook some sweets and snacks.

Once or twice, per month, they eat fast food in McDonald's or KFC in Singapore as their daughter likes to eat this. IP w admitted that it is not very healthy. They had a bad experience after they ate at McDonald's a few months ago, her daughter started to vomit, after that, they reduced their fast food intake.

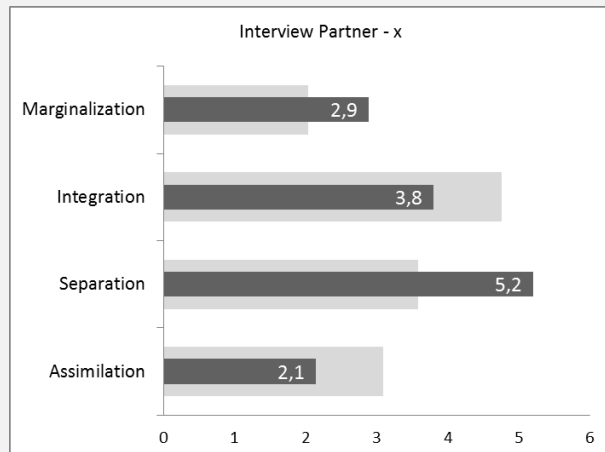
Life situation September 2013: IP w gave birth to another daughter in 2013. She still lives with her family in Singapore.

A32. Interview x

"Ah, I should say my food intake has not changed, because even now my grandmother cooks for me. I take lunch from home. So it doesn't change. But ah what I can say is like, ah because I'm in Singapore, sometimes if I don't take food, I like to eat out." (IP x, line 259)

Table A32: Characteristics of IP x (source: author's own)

Socio-demographic data						
State of origin		Tamil Nadu				
Gender		female				
Age		27				
Marital status		single				
Housing situation		living together with grandparents				
Years living in Singapore		3				
Employment		Software-Engineer				
Dietary Changes, Affecting Factors and Acculturation Aspects as keywords						
Dietary Changes		<ul style="list-style-type: none">• more outside food• NIF for breakfast• more NIF• started to eat fast food				
Affecting Factors		<ul style="list-style-type: none">• mother: learns her easiest way of cooking• sister, grandparents: told her not eat beef and pork, maintain traditional Indian cooking• taste: like Indian and Thai food• convenience: prefers easiest way of cooking• environment: eats sometimes fast food in office• religion: does not eat beef and pork				
Acculturation Indicators		<ul style="list-style-type: none">• SGP has pros and cons, would prefer to move back to India• visits temples on regular base• celebrates festivals more than in India				
24-hour dietary recall						
	food	time	place of eating (home/outside)	IF	WF	OAF
Breakfast	rice, spinach curry, bean sprouts side dish	8.30 am	homemade	x		
Lunch	same as breakfast	12.00 pm	homemade	x		
Dinner	rice sevai milk	8.30 pm	instant dried food, bought from India. boiled	x		
Snacks	oats biscuit	4.00 pm	bought from local store			x

East Asian Acculturation Measure (EAAM)**General information about her life in India**

When her grandfather worked in Singapore, the Singapore government only allowed her grandmother and any children below five to stay in Singapore. Hence, her mother grew up at her relatives place. IP x grew up in a town. Before she moved to Singapore, she worked in India and stayed with her friends. She belongs to the Chettinad caste.

Eating habits in India

They had the same food for **breakfast** and **lunch**. Rice was the main part of these meals. Her mother is very fast in cooking. When they lived together, her mother did the main cooking, which means she made the curry, while IP x used to do easy jobs like preparing the idlis. When they were sick as a child, they got idlis, as it is very healthy. Idlis are steamed food; they do not contain oil and will be digested very fast.

Most of the foods they prepared at home freshly and they did not rely on the stuff from the shops as some things might be adulterated. Every Sunday her mother cooked non-vegetarian food like chicken, mutton, goat or fish. They used onions and garlic regular in their cooking.

They did not eat outside often. IP x explained that outside food is not very healthy in India. She never had fast food from McDonald's or KFC in India, but ate Indian fast food from the roadside stalls, like fried chicken and mushroom soup. She loves Chettinad food and ate it daily in India, but explained most of these foods are not so healthy because they are made out from oil and also there are many sweets with lots of sugar. Chettinad food is mostly popular within her caste only. She sounds very proud when talking about this. While she stayed with her friends in India, they used to cook together. Some roommates

were vegetarians and did not want them to cook non-veg food in the house, so she ate non-veg food outside in the hotels.

The relocation

She moved to Singapore to do her Master studies besides full-time working and she can stay with her grandparents. Her sister also lives in Singapore.

General information about her life in Singapore

She likes Singapore but does not know how long she will stay there as: *"(...) I always have a feeling like, ah, okay, this is not my motherland. India is my motherland."* There are many facilities in Singapore which are better than in India but if she would have the choice between India and Singapore she would go back home. Once in six month she travels to India. She follows the traditions in Singapore even more than in India, as her grandmother is very orthodox. Her mother never compelled them to visit a temple regularly. *"But here, they follow it very strictly. [IP laughs.]. My grandmother insists we should all go to the temple, ah, like that."* She prays at home in the morning. Her grandmother is directing the family in practising the Indian traditions. IP x explained if she would stop working after getting married, she will continue the traditions, but in case she is working, she will keep it like her mother did it in India and not give so much importance to the traditions. One year after the interview took place she got married and she continued working.

Eating habits in Singapore

Her eating habits did not change much, as her grandmother cooks for her. After she came to Singapore, she **tried Chinese and Thai food**. She could not exactly say if she ate more non-veg food in India as she says her taste differs from time to time and at the moment she does not have much non-veg food. She does not eat beef and pork and never tried to eat it. *"Ah, I don't know whether it is caste-related, but my sister said, okay, you should not have beef and pork. I just did not ask the reason why."* Her mother allowed her to eat beef and pork, but IP x decided to abstain from it, as cows are considered as gods. She explained that it is common in India to bring cows with a calf into new houses for the warming ceremonies. The animals have to go thru the main entrance, people follow them and pray. She does not eat pork because *"Ah, ah, it ... there is such a myth that, ah, God once took the form of a wild pig and, ah... ah, he did something good for the world."*

In India, she liked non-veg food more than vegetarian while in Singapore she prefers to eat vegetarian food: *"Yeah, I'm not vegetarian. But ahm ... most of the days in the week, I'll be vegetarian."* [IP laughs]. Sometimes she feels non-

vegetarian food might not get digested properly and also since she sees "(...) *these ads like go green, save planets, then I feel like okay ... I feel all the while like 'okay I should not eat non-vegetarian' ... I feel like I'm contributing some good cause ... to that.*" She explained that her grandmother cooks vegetarian food better than her mother does. The grandmother used to eat non-vegetarian food until IP's mother got a problem with her leg. Then the grandmother prayed to god that he should not let her daughter suffer so much and therefore she gave up eating non-vegetarian food and she does not cook it as well.

Concerning to her, fasting rituals are depending on the family and she explained in details about the different fasting traditions in India. Her parents consult the astrologers for her in India and then the astrologers advise her when she should fast, which is depending on her horoscope.

For **breakfast** in Singapore, she eats bread with butter or jam and drinks a Milo. Sometimes she also eats cereals. Since her grandparents are in India currently, she just cooks for her own. IP x cooks rice in the morning for her **lunch** and eats it also for breakfast and she also prepares a curry and some side dishes which she packs for lunch. Last time she cooked by her own was when she stayed with her friends in India three years ago. Her sister or her grandmother is usually doing the major part of cooking while she just assists with cutting or cleaning vegetables. She cooks just Indian food because she knows how to cook this properly. When she is cooking by her own, she uses only some recipes from her grandmother and she admitted: "*I don't want to spend that much amount of cooking time ... Ah, so I generally refer to my mum. [smiling] And she will give me the simplest, the easiest way of doing.*" She calls her mother in India and then tells her what she has in the fridge and asks her what she can prepare out of it for tomorrow, but she adds that: "*Sometimes I decide on my own.*" Her mother learnt cooking on her own as IP's grandmother stayed in Singapore without her daughter, only later when IP's mother stopped working she travelled to Singapore and then learnt some cooking from the grandmother.

Sometimes she has lunch at the canteen or the hawker centre. When her grandmother is in Singapore she usually cooks lunch for IP x which she packs. She mainly **drinks** water, very rarely juice. She explained, eight glasses of water per day would be good but she does not drink this amount as she drinks only when she feels thirsty also she knows that this is not good.

For **dinner** her grandmother always keeps the rice flavour for the dosa in the fridge and when IP x comes home from work she uses this rice flavour to prepare dosa and eats as a side dish "(...) *the curry, ah whatever was kept for*

that day for ah ... the lunch" or whatever is there from the previous days. At the moment she cooks something light for herself in the evening like dosa or idiyappam. From time to time, she eats dinner in a hawker centre. About NIF, she mentioned: *"I like this sorts of food, maybe just for one course or two courses, like maybe for lunch or dinner. But I would like to go back to my normal food [smiling] for the, for the ... others. I mean I cannot continue like this for days together."* When she eats Chinese food at the food stalls, she takes rice and vegetables and sometimes fish or chicken. She **eats NIF once to twice per week** and likes the Thai style of cooking as it is similar to the Indian cooking especially the curries. That is why she prefers the Thai food to the Chinese.

In Singapore, they make their own turmeric, masala powder and yoghurt. Most of their ingredients they buy in India whenever someone of the family goes there. IP x mentioned that it is too expensive in Singapore. They prefer to buy the seasonal vegetables and fruits and try to make sure that they are free of chemicals. Her grandmother buys vegetables from the nearby wet market. Whenever IP goes to Little India, she will buy vegetables for the whole family including her uncles families as her grandmother will share it with them.

When she travels, food alone is not the main concern. She can manage to stay without Indian food for one week. After one week, she will miss Indian food. In Singapore, she misses several dishes that are authentic to her home state and the Indian sugar cane.

IP x eats fast food in Singapore only when she stays late in the office and they order it, but even than she says she prefers to go home and eat there. Very rarely, she had fast food when she was at university on weekends due to limited choices. There is one restaurant in Little India with authentic Chettinad food, but she has not been there yet.

On festival days, her grandmother invites all relatives and friends who live in Singapore. They celebrate in Singapore the festivals Pongal, Deepawali and Chitra Pournami. On those days, lunch would be the *"grand"*. It will be rice with two or three curries, rasam, curd and then three to four side dishes and pappadam. In addition to this, there will be the special offerings for the gods that they share after they were offered, e.g. the coconut water. She knows exactly, which food has to be prepared for which festival and explained all the details. Her grandmother learnt her about all this and IP x mentioned that her mother and her grandmother had a meaningful influence to her nutrition.

Life situation September 2013: IP x got married and now lives together with her husband.

A33. Indian Foods (Glossary)

Glossary of typical Indian foods and dishes, unless otherwise noted, explanations were resumed from the category “Indian food” of the interview data

Biryani	rice-based dish, can be prepared with meat, fish, eggs or vegetables and divers spices
Brinjal	eggplant
Burfi	sweet made from condensed milk and sugar
Chapati	Indian bread, wheat based
Curry	from the Tamil word “kari”, meaning “sauce”, common ingredients are vegetables, meat or fish and suitable masalas. Usually served with rice or Indian breads, like chapati or naan (Morisset and Kumar, 2008)
Dhal	dish made from pulses like lentils, chickpeas or beans
Dosa	pancake on rice and lentil basis
Ghee	clarified butter
Halwa	Indian sweet mainly flour or nut-butter-based
Idli	steamed cake on rice and lentil basis
Jaggery	sugar concentrate of cane juice and palm sap
Maida	plain flour
Masala	spice mix
Naan	bread
Obbattu	sweet, made from flour, dhal, jaggery and spices
Papadam	crispy thin bread made from urad flour
Payasam	Indian sweet
Pickles	vegetables, fruits or meat pickled in sweet or spicy gravy
Pokora	vegetables or meat sprinkled with flour and deep-fried
Pongal, spicy	breakfast item, made from rice, dhal, ghee, cashew nuts and spices
Pongal, sweet	festival dish based on rice, milk and jaggery
Pullusu	watery vegetable dish
Puri	Indian bread, deep fried
Ragi Ball	made by finger mill, flour and water; tasteless itself, has to eaten with chutney or gravy
Rasam	lentil soup, including tomato, tamarind juice and spices
Sambar	lentil soup with tamarind and prepared with divers spices
Upma	porridge from semolina
Uttapam	thick pancake in rice and lentil basis
Vada	deep-fried snack, either based on gram flour, potatoes or lentils
Vanaspati-Oil	vegetable oil

A34. EXAMPLE FOR SCALABLE STRUCTURING

Step 1 to 5 for category "Breakfast India"

1. Definition of the analysis unit: codings for "breakfast India"

2. Definition of the values based on the codings for „breakfast India“



3. identification of typical passages from the responses as anchor examples

4. development of coding rules

Mostly Non-Indian, sometimes Indian

IP s:...even when we were in äh [short thinking]...school, high school, very often for breakfast we would have cereal or bread though it was maybe not as common...very rarely maybe on the weekend or if we are on a holiday we are travelling in India, ähm... on the road side you would have these small äh... shops, food, like food stalls...

When eating Indian food less than once per week

Mostly Indian, sometimes Non-Indian

IP f: yeah, yeah I mean my mum used to cook Indian food but once a week we used to have bread also, the day she could not cook any Indian breakfast than we used to have bread
IP c: Mh maybe I wouldn't have toasted bread and coffee so often it might be more ähm typical Indian breakfast items

- When eating Non - Indian food once per week
- Using the terms „not so/very often“, „sometimes“, „once in a while“

Indian food

IP i: We eat usually idlis.
IP g: Usually we have different varieties of breakfast like Idli, Dosha, Pokhara, Puri, Chapati so usually it will be on rotation weekly once or twice they prepare Idli ok once or twice they prepare Upma or dosha something like that it is not consistent
IP u: Previous, yeah, I used to have for mornings, right, I usually have either dosa, idli.

When eating Indian breakfast every day

5. Analyzing the interviews, identifying and coding text segments

The screenshot displays a qualitative data analysis software interface. On the left, a hierarchical codebook is shown under the heading 'Codesystem'. The codebook includes categories such as 'eating habits & dietary acculturation', 'breakfast_SGP', 'lunch_SGP', 'dinner_SGP', 'snacks_SGP', 'drinks_SGP', 'Fast food frequency India', 'eating out - frequency_SGP', 'eating out - frequency, reasons_SGP', 'eating out - places, cuisines_India', 'eating out - places, cuisines_SGP', 'cooking habits', 'Festival food', 'Food traditions', 'Home remedies', 'eating habits of the family', 'Favorite food', 'Favorite cuisine', 'Family sending food from India', 'which food missing', 'important shopping factors', 'shopping places for food', 'shopping frequency', 'Non-Indian food, open to try', 'taste of non-indian food', 'learning from other cuisines', and 'living without Indian food'. The 'breakfast_SGP' category is expanded, showing sub-codes: 'other', 'completely Indian breakfast', 'mostly Indian breakfast, sometimes Non-Indian', 'mostly Non-Indian breakfast, sometimes Indian', 'completely Non-Indian breakfast', and 'skip breakfast'. In the center, a list of interview segments is displayed, each with a code and a brief description. On the right, a list of interview excerpts is shown, each starting with 'IP i:' followed by the text of the interview. Red arrows point from the 'breakfast_SGP' category in the codebook to the corresponding segments in the list, and from the 'breakfast_SGP' category to the corresponding excerpts on the right.

IP d: Ah... yeah, cereals. But not very often. Once in a while or like that. Indian food is more like so
ot puddings or something like that. So...

IP i: Yeah, breakfast in India to me is, ah, I always have ... I always choose one type of restu
India. I've been eating ... I used to eat regularly there.

So ... the food and breakfast I really like in India. Yes.

IP i: Yes, restaurant. Eat. And then go.

We eat usually idlis.

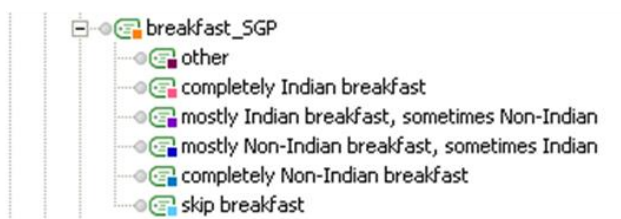
So we make idli.

IP i: ...dosa is more common. And then we have a lot of things. Pongal, we call as pongal. TI

Repeating the same steps for the category “Breakfast Singapore”

1. Definition of the Analysis Unit: codings for "breakfast Singapore"

2. Definition of the values based on the codings for „breakfast Singapore“



3. identification of typical passages from the responses as anchor examples

4. development of coding rules

other
 IP l: And so now, my shake is protein powder ... just the regular protein powder ... wheat germ and flaxseeds and the fruit and low fat milk.
 IP m: [IP m interrupting] Myself, I...ah I take brunch. I usually take ... morning, I drink water, water treatment, over 900 ml of water in the morning and nothing else

Completely Indian breakfast
 IP w: Yeah, Indian breakfast.
 IP g: yeah here there are different varieties we have puri, dosa all those things we can get in the basement so I will eat one of the Indian varieties

Mostly Indian, sometimes Non-Indian
 IP e: No, if at home, I'll cook in the morning.
 IP e: I mean omelette. You prepare omelette and then eat. So and then ah... toasted bread most of the time and then noodles.
 IP e: Ah but now we stopped cooking since we are very busy with work. So, ah we'll come here and eat daily dosa, since last one month. [Laughing]

Mostly Non-Indian, sometimes Indian
 IP n: It's ...here, we have just bread and cereals.
 IP n: So when she comes, then morning ah...dishes also becomes rice dependent. [IP n smiling].
 IP o: So generally, on an average I can say ah dosa and idli is done once or twice a week. It is done for breakfast, along with the chutney, the coconut chutney.
 IP o: And weekdays it's breakfast cereals.
 IP q: ...whereas now, it's more only on weekends we do all of that. And on weekdays, we have oats most of the time.

Completely Non-Indian
 IP d: So I don't go there and eat. So I just keep eating some bread or some biscuits or some fruits in the morning or some pastas or ah some ...noodle is very rare ...or some cereals.
 IP j: Bread and jam, sometimes with egg or ... nowadays we just mostly buy only ... mostly buy and eat cake or the ready made cakes, bought some buns or...

Skip breakfast
 IP a: breakfast I don't eat breakfast

When not eating typical SGP or Indian breakfast items; e.g. Protein shake or just drinking water

Definitively saying that they have Indian breakfast

Non-Indian breakfast only on weekends

Indian breakfast on weekends or three a week or less or when mother or mother-in-law is in SGP for cooking

Definitively saying that they have Non-Indian breakfast

Definitively saying that they skip breakfast

5. Analyzing the interviews, identifying and coding text segments

The screenshot displays a qualitative data analysis software interface. On the left, a list of documents is shown with their IDs and frequencies. The central pane, titled 'Liste der Codes', lists various codes and their frequencies. On the right, interview transcripts are displayed with red arrows pointing from specific text segments to the corresponding codes in the central list.

Codes and Frequencies:

Code	Frequency
eating habits & dietary acculturation	0
diet acculturation	174
diet change after moving to SGP	93
eating habits in general	246
eating habits in India	95
eating habits in SGP	54
breakfast_India	103
breakfast_SGP	103
other	4
completely Indian breakfast	10
mostly Indian breakfast, sometimes Non-Indian	4
mostly Non-Indian breakfast, sometimes Indian	34
completely Non-Indian breakfast	24
skip breakfast	7
lunch_India	91
lunch_SGP	120
dinner_India	64
dinner_SGP	120
snacks_India	17
snacks_SGP	8
drinks_India	13
drinks_SGP	34
fast food frequency India	19

Interview Transcripts and Coding:

- IP a:.. breakfast I don't eat breakfast [smiling embarrassed] → skip breakfast
- IP a:.. breakfast I don't eat breakfast [smiling embarrassed] → skip breakfast
- IP b: Yeah in generally I skip the breakfast → skip breakfast
- IP b:.. skipped means I have a cup of milk, I have bread, so maybe a cup of milk and → breakfast_India
- IP b: bread, normal bread, the bread you get in the bakery shops kind of thing, yeah → breakfast_India
- for breakfast... breakfast this is my standard normally I have a cup of milk and have bread → breakfast_India
- apple every day morning I have apple, yeah I have not written that. → breakfast_India

By merging the results for “Breakfast India” and “Breakfast Singapore” within a matrix, changes in breakfast eating habits were identified and visualised as shown in Figure 23.

A35. Matrix to compare dietary acculturation and results for the EAAM

	IP a	IP b	IP c	IP d	IP i	IP f	IP e	IP g	IP h	IP o	IP n	IP p
breakfast SGP acc. Strategy	marg	ass	ass	ass	ass	ass	sep	sep	marg	ass	ass	ass
lunch SGP acc. Strategy	integr	integr	integr	sep	integr	sep	integr	sep	sep	sep	sep	ass
dinner SGP acc. Strategy	integr	sep	integr	integr	sep	sep	sep	integr	sep	sep	sep	ass
grocery shopping acc. Strategy	integr	integr	integr	integr	integr	integr	integr	integr	integr	integr	integr	integr
opinion SGP like	x	x	x	x	x	x	x	x	x	x	x	x
opinion SGP pros/cons dislike												
stay forever yes												
stay forever not decided												
stay forever no	x	x	x	x	x	x	x	x	x	x	x	x
regular temple visits												
regular temple visits sometimes												
regular temple visits no	x	x	x	x	x	x	x	x	x	x	x	x
celebrating festivals	x	x	x	x	x	x	x	x	x	x	x	x
celebrating festivals yes lower extent												
celebrating festivals no	x	x	x	x	x	x	x	x	x	x	x	x
acc. Strategy integrated	x	x	x	x	x	x	x	x	x	x	x	x
acc. Strategy separated												
acc. Strategy assimilated												

n=9	results from EAAM and daily meals agree
n=10	results for daily meals tend to separation, EAAM tend to integration
n=1	results for daily meals tend to separation, EAAM tend to assimilation
n=2	results for daily meals tend to assimilation EAAM tend to integration or separation
n=1	results for daily meals: mixed between ass. sep and marg. EAAM tend to integration

dietary accul- turation	breakfast SGP acc. Strategy	IP l	IP k	IP m	IP j	IP q	IP r	IP s	IP u	IP t	IP v	IP w	IP x
	lunch SGP acc. Strategy	integr	ass		ass	ass	ass	ass	sep	ass	marg	sep	ass
cultural and psychological acculturation aspects	dinner SGP acc. Strategy	sep	sep	sep	sep	sep	sep	sep	sep	sep	sep	sep	sep
	grocery shopping acc. Strategy	integr	sep	sep	integr	integr	sep	sep	marg	integr	marg	integr	sep
	opinion SGP like pros/cons dislike	x	x	x		x	x	x		x	x	x	x
	stay forever yes not decided no	x		x		x	x		x			x	x
	temple visits regular sometimes no	x	x	x	x	x	x	x	x	x	x	x	x
	celebrating festivals yes lower extent no	x	x	x	x	x	x	x	x	x	x	x	x
	acc. Strategy integrated		x	x		x	x	x	x	x	x	x	
	acc. Strategy separated				x								x
	acc. Strategy assimilated												

n=9	results from EAAM and daily meals agree
n=10	results for daily meals tend to separation, EAAM tend to integration
n=1	results for daily meals tend to separation, EAAM tend to assimilation
n=2	results for daily meals tend to assimilation EAAM tend to integration or separation
n=1	results for daily meals: mixed between ass, sep and marg, EAAM tend to integration

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